No. 131.

Brief of Stall for Appellees.

Supreme Court of the United States.

October Term, 1898.

Filed Oct. 4, 1899.

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THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, APPELLANT,

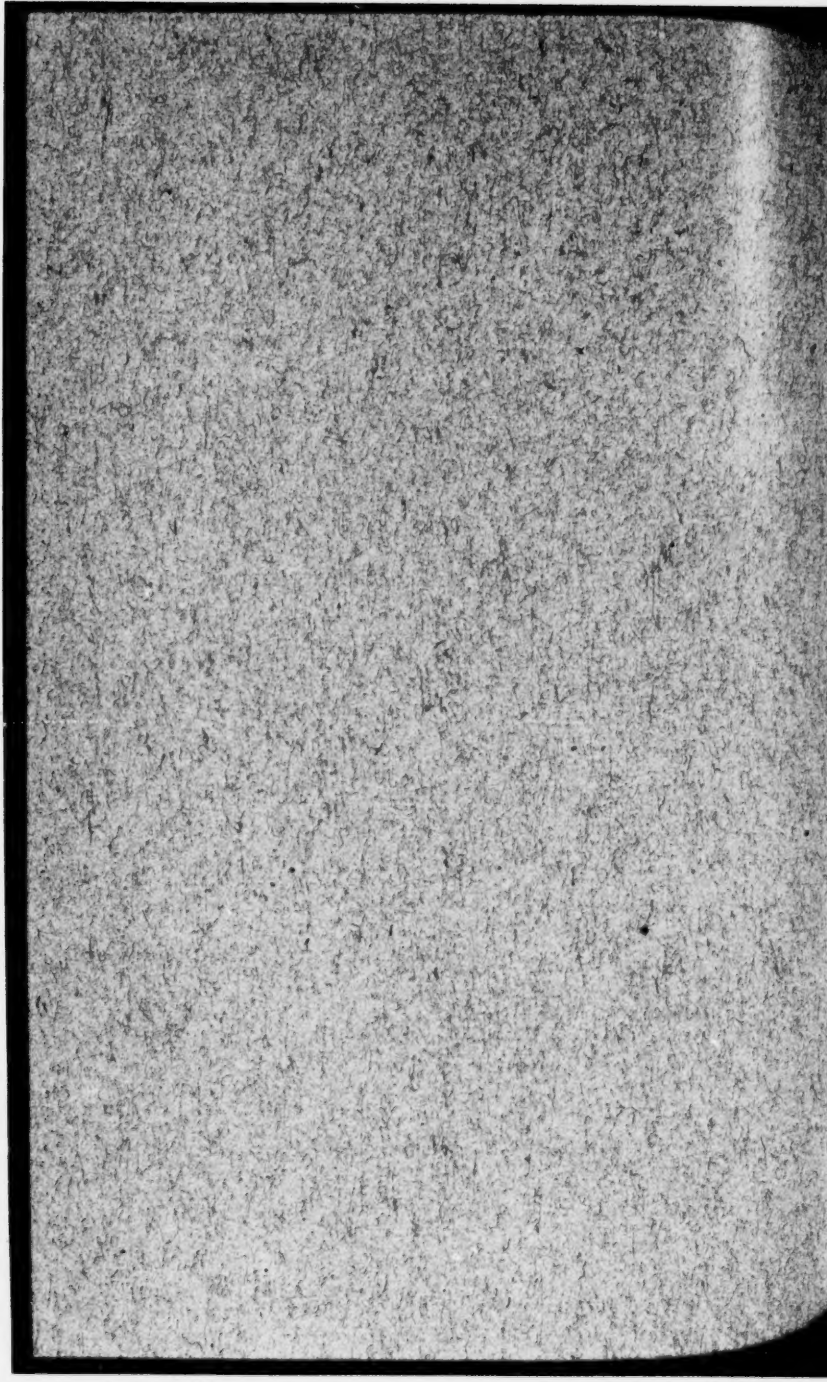
vs.

WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, AND ALEXANDER KIRKPATRICK, CONSTITUTING THE BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF SOUTH DAKOTA, ET AL., DEFENDANTS.

Appeal from the Circuit Court of the United States for the District of South Dakota.

BRIEF AND ARGUMENT FOR DEFENDANTS.

JOHN L. PYLE,
Attorney General, South Dakota.
W. O. TEMPLE AND
T. H. NULL,
Solicitors and of Counsel for Defendants.



Supreme Court of the United States.

October Term, 1898.

No. 396.

THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY COMPANY, APPELLANT,

vs.

WILLIAM H. TOMPKINS, W. T. LA FOLLETTE, AND ALEXANDER KIRKPATRICK, CONSTITUTING THE BOARD OF RAILROAD COMMISSIONERS OF THE STATE OF SOUTH DAKOTA, ET AL., DEFENDANTS.

Appeal from the Circuit Court of the United States for the District of South Dakota.

BRIEF AND ARGUMENT FOR DEFENDANTS.

MAY IT PLEASE THE COURT:

On Februrary 3rd, 1897, the legislature of South Dakota passed an act relating to common carriers, being Chapter 110 of the Session Laws of 1897.

Section 20 of said act reads as follows:

§ 20. COMMISSIONERS TO MAKE SCHEDULES OF MAXIMUM RATES AND FARES—PUBLICATION OF—TAKE EFFECT WHEN.] The board of railway commissioners of this state are

hereby empowered and directed to make for each of the railroad corporations doing business in this state, as soon as practicable, a schedule of reasonable maximum fares and rates of charges for the transportation of passengers, freight and cars on each of said railroads, and said power to make schedules shall include the power of classification of all such freights, and it shall be the duty of said commissioners to make such classification. Provided, the maximum compensation per mile for the transportation of any person with ordinary baggage, not exceeding one hundred and fifty pounds, shall not be greater than three cents per mile between points where the distance traversed is entirely within this state, except upon narrow gauge railroads, and said railroad commissioners shall for the purpose of making a maximum fare and charges for the transportation of passengers and freight, classify said railroads as far as practicable according to the gross amount of their respective annual earnings per mile within the state for the three years preceding the time of making the classification, and said classification may be changed from time to time as the railroad commissioners may order. Said schedules so made by said commissioners shall in all suits brought against such railroad corporations, wherein is in any way involved the charges of any such railroad corporation for the transportation of passengers and freight or cars or unjust discrimination in relation thereto, be deemed and taken in all courts of this state as prima facie evidence that the rates and passenger fares therein fixed are reasonable and just maximum rates of charges for the transportation of passengers, freight and cars upon the railroads for which said schedules may have been respectively prepared. Said commissioners shall from time to time, and as often as circumstances may require, change and revise said schedules. When any schedule shall have been made or re-

vised as aforesaid, it shall be the duty of said commissioners to cause notice thereof to be published for two successive weeks in two public newspapers published, one in the county of Minnehaha and one in the county of Lawrence in this state, which notice shall state the date of the taking effect of said schedule, and said schedule shall take effect at the times so stated in such notice, and a printed copy of said revised schedule shall be conspicuously posted by such common carrier in each freight office and passenger depot upon its line or lines. All such schedules, so made, shall be received and held in all such suits as prima facie the schedule of said commissioners without further proof than the production of the schedule desired to be used as evidence, with a certificate of said railroad commissioners, that the same is a true copy of the schedule prepared by them for the railroad company or corporation therein named, and that notice of making the same has been published as required by law; Provided, that before finally fixing and deciding what the original maximum rates and fares and classifications shall be, it shall be the duty of the railroad commissioners to publish ten days' notice in two daily papers published, one in the county of Minnehaha and one in the county of Lawrence, setting forth in such notice that at a certain time and place they will proceed to fix and determine such maximum rates, fares and classification; and they shall at such time and place and as soon as practicable, afford to any person, firm or corporation, or common carrier who may desire it, an opportunity to make an explanation or showing or to furnish information to said commissioners on the subject of determining and fixing such maximum rates and classification; and in any event the original schedule of rates and classification of freights on all lines of railroads in South Dakota shall be fixed and shall go into effect on the first day of July, 1897.

The defendants, constituting the board of railroad commissioners of the state of South Dakota, having taken the preliminary steps required by said law, did, on the 26th day of August, 1897, promulgate, publish and serve a schedule of maximum rates of charges for the transportation of passengers, freight and cars for each of the railroad corporations, including the complainant, doing business in South Dakota.

On the 27th day of August, 1897, the complainant instituted this action to enjoin the enactment of such schedule. At the same time seven other companies instituted similar proceedings.

It is claimed in the bill of complaint that the schedule, if enacted, would not afford to complainant an adequate compensation for its service and result in taking its property without just compensation or due process of law, and would deprive it of the equal protection of the laws.

The bill of complaint, answer and replication constitute the pleadings. No question arises as to the sufficiency of either of the pleadings, and the issues will be found to be almost entirely issues of fact.

The issues may be briefly stated as follows:

The value of complainant's lines of railway in South Dakota.

The value of complainant's equipment on its South Dakota lines.

The annual expenditure required to maintain complainant's railway in South Dakota.

The annual expenditure required to maintain complainant's equipment in South Dakota.

The annual operating expenses in South Dakota.

The distribution of the cost of maintenance and operation as between the freight and passenger service, and the distribution of the cost of the freight service as between the inter-state and local traffic, and the distribution of the cost of the passengar service as between the inter-state and local traffic.

The annual revenues derived from the freight and passenger traffic, local to the state of South Dakota.

The amount which the local traffic should contribute to capital account for the payment of interest and dividends.

The reasonableness of the proposed rates.

At the time this action was instituted the complainant owned and operated 6,148.23 miles (main track) of railway, of which 1,101.06 miles were in South Dakota.

Its capital consisted of $75,081,500 of capital stock and $137,762,000 of funded debt, amounting to $212,843,500 or $12,211.89 of stock and $22,406.77 of debt per mile.

During the fiscal year ending June 30, 1897, complainant's revenues from all sources amounted to $30,468,767.99 or 14.3 per cent. of its total capital.

Out of this revenue complainant paid:

Operating expenses	$18,577,539.08
Interest	7,488,746.85
Dividends	3,737,453.00
Passed to surplus	683,029.06
Total	$30,486,767.99

Complainant operates its great system of railway as an entirety and does not keep separate accounts of its transactions in each of the several states through which its lines of railway extend. In order to comply with the requirements of the laws of the several states requiring statements of the operations of the railway within the borders of the state complainant has adopted a system of percentage and division by which it makes an approximated statement of its operations in any particular state. Such statements showing complainant's annual operation in South Dakota have been filed with the defendant board of commissioners.

For the purposes of this case, such approximated statements have not been accepted and an effort has been made to ascertain the actual result of complainant's operations in South Dakota, particularly for the fiscal year ending June 30, 1897.

There is no dispute as to the law governing this case. The issues are purely issues of fact and will be discussed in the order in which they have been stated.

The value of complainant's railway in South Dakota.

Complainant does not state the value of its property in its bill of complaint, and the first intimation of their claims in this respect is found in the testimony of Mr. Winnie, the auditor of complainant company.

He testifies that the road in South Dakota is mortgaged for $19,365,247.16 or $17,587.82 per mile (Exhibit 4, page 11), and that the capital stock amounts to $12,211.89 per mile (Exhibit 5, page 13), making a total of $29,799.21 per mile.

Complainant next introduces the testimony of Mr. Whittemore, the cheif engineer of complainant company. He testifies that he has occupied this position since the organization of the company in 1863 and that all its properties have been acquired or constructed under his supervision.

He further testifies:

Q.—Have you made careful estimate of the cost of the South Dakota line?

A.—I have.

Q.—In what manner have you computed the original cost of the South Dakota line?

A.—From data in my office, from the price paid at the time for the work and materials as ascertained from the auditor's books and from my own record and from my remembrance of the whole work, collectively taken together. (Pages 396-397).

The estimate referred to was offered in evidence and marked "Exhibit 25," (page 423), and is as follows:

EXHIBIT 25.

ESTIMATED COST OF CHICAGO, MILWAUKEE & ST. PAUL RAILWAY IN SOUTH DAKOTA.

Length of Main Track, 1,101.06 miles.	Of Side Track, 86.15 miles.
12,442,000 Cu. Yds. earthwork @ 15.16c	$ 1,886 207 00
5,000 Cu. Yds. riprap @ $1.50	7,500 00
11,011,000 Ft. B. M. Timber in bridges and culverts, (including cost of erection), @ $30	330,330 00
467,600 Lin. feet piles in bridges @ 35c	163,160 00
8 Truss bridges	35,495 00
286 iron pipe culverts in place of wooden ones, betterment, @ $50	14,300 00
106,300 tons (gross) rails, average cost @ $46 761	4,970 627 00
8,310,600 lbs. track spike @ 2½c	207,765 00
418,000 pairs of rail joint splices, complete, @ $1	418,000 00
3,562,000 cross ties @ 30c (3,000 ties to the mile)	1,068,600 00
690 switches, complete, @ $100	69,000 00
10 railroad crossings, @ $200	2,000 00
1,187 21-100 miles track laid and surfaced @ $450	531,244 00
267 miles of track ballasted, @ $500	133,500 00
1,101 miles of track, the material for which was moved to the front from the nearest point of distribution at a cost per mile of $140	154,140 00
505 miles of right of way fenced, @ $280	141,400 00
32,000 panels snow fence (100 miles) @ $2.10	67,200 00
288,000 ft. B. M. crossing plank (for 1,200 crossings), @ $20 per M	5,760 00
1,000 cattle guards, estimated, @ $10	10,000 00
Freight on track material, @ ¾c per T. M	2,342,323 00
Freight on bridge and culvert material, @ ¾c per ton mile	108 862 00
Freigth on contractor's tools and supplies @ ¾c per ton mile	8 250 00
Freight on contractors' teams to work, @ ¾c per ton per mile	6,600 00

6,600 men transported to the work (2c per mile)...		66,000 00
256 station sign boards, @ $6.....	$1.536	
1,200 highway sign boards, @ $5.....	6,000	
40 R. R. Crossing sign boards, @ $6.....	240	
40 R. R. Crossing stop boards, @ $6.....	240	
2,000 whistle posts, @ $1.....	2,000	
510 mile posts, @ $1.....	510	
1,100 rail rests @ $1.....	1,100	11,626 00
Cost of buildings, including shops, freight and passenger stations, coal sheds, tool houses, stock yards and water stations, as per estimate of bridge and building department....		940 606 00
Cost of right of way and station grounds, 1.101 miles @ $128 per mile.....		140 928 00
Cost of telegraph lines, instruments and tools owned solely by C., M. & St. P. Ry. Co.....		40 626 00
One-half cost of telegraph lines, instruments and tools owned jointly with telegraph company		30,656 00
Engineering, superintendence, legal and general office expenses, estimated, @ $300 per mile of main track.....		330 300 00
		$14,246,505 00
Add interest on the cost as above given for one-half the time during which the line was under construction, one year @ 6 per cent.....		854,790 00
Track tools, 125 sections, @ $138 each.....		17.250 00
Station furniture and supplies 94 stations, @ $78.....		7,332 00
		$15,125,877 00
For betterment to roadbed and bridges, etc., estimated at 5 per cent of the above.....		756,294 00
Total estimated cost of lines in South Dakota, exclusive of equipment, shop plants outside of the state and stock material.....		$15,882,171 00

Making total cost per mile of main track, exclusive of equipment, shop plants outside of the state and stock of material	14,425 00
To which add for permanent supply of cormant, or non-earning material, kept in store and without which the railway could not be successfully operated	300 00
Total investment per mile, exclusive of equipment and shop plants outside of the state	$14,725 00

Chicago, January 25, 1898.

By this statement complainant fixed the cost of construction at $15,882,171.00 or $14,425.00 per mile.

Inasmuch as complainant offered no other testimony on this issue, Exhibit 25 constitutes complainant's case on the question of value of the roadway.

It will be noticed that this statement is an estimate and not a record of actual expenditures.

The complainant has in its possession the only record in existence that shows the actual expenditure made in acquiring these properties.

THE AUDITOR TESTIFIES.

Q.—Mr. Winnie, in the account of cost of road and equipment the item stated at the end of the last fiscal year, $212,594,714.15—what does that include?

A.—That includes the cost to this company of the property which they had at that time.

Q.—Exclusively railroad property?

A.—Exclusively railroad property.

Q.—And does that represent the actual cost, so far as you know?

A.—It represents the actual cost so far as I know.

Q.—That account was begun with the organization of the company?

A.—Yes, sir.

Q.—And has been continued from that time to the present?

A.—Yes, sir. (Pages 37-38).

Q.—Can you tell from the records of your office the consideration paid for the lines that were acquired by purchase?

A.—Yes, sir. (Page 39).

Q.—Mr. Winnie, in the construction of South Dakota lines, was there a considerable portion of the lines constructed under what is known as the Patterson extension?

A.—Yes, sir.

Q.—And have you in your office a distinct account of the cost of the construction of that extension?

A.—Yes, sir.

Q.—What particular lines in South Dakota were constructed under the construction known as the Patterson extension?

A.—Pattersonville extension, it is called. The account of the Pattersonville extension includes the construction of the line from Pattersonville, now called

Hull, in Iowa, to Chamberlain on the Missouri, and also the line from Marion Junction to Running Water on the Missouri.

Q.—And was the cost of constructing that extension kept in a separate, distinct account until about the end of the year of the construction of the extension and then charged in a lump sum to cost of road and equipment?

A.—It was so kept.

Q.—And can you furnish us with a detailed account of that construction, as shown by the books of your office?

A.—I can, sir. (Pages 55 and 56).

This account was furnished and offered in evidence as defendant's Exhibit 55, but owing to its volumnious character only portions of this account have been included in the printed record. (Pages 762-763).

From the foregoing it will be seen that the complainant has a record from which it could have given us the actual expenditures.

We will now consider the estimate item by item.

The first item, 12,442,000 yards of earth work, we have been unable to investigate. In December, 1897, the defendants asked complainant for a profile of its road in South Dakota. The complainant promised to furnish it, but no profile was furnished until about April 30th, 1898, when a pretended profile was present-

ed to the defendants by the complainant, but it did not contain the data from which an estimate of the earthwork could be made, although it was well known that that was the purpose for which the profile was wanted. (Pages 821-2-3-4 5-6-7 and 839).

We will next consider the item of rails. Mr. Whittemore has charged in his estimate 106,300 tons of rails at $46.76 per ton. Mr. Whittemore testifies that he figured on 56-lb. rails for original construction, part of which was iron and part steel rails.

The testimony shows that since the lines were constructed the rails used in the original construction have been replaced with relayer steel weighing 60 lbs. to the yard.

Mr. Earling, the general manager of the complainant, testifies as follows concerning these rails:

Q.—Could you tell me how many tons of new rails were actually laid on your South Dakota lines last year?

A.—The number of miles of rails that were replaced in South Dakota for the year ending December 31, 1897, was 125 miles and 851 feet; these were not all new rails. Most of them—I think all were steel rails that had been taken up from other lines and which had been straightened and the ends sawed off where they had been kinked a little and re-drilled and put in first-class condition.

Q.—Were they all steel rails?

A.—Yes, sir; they were all steel rails.

Q.—And at what price were they charged up?

A.—*At $24.50 per ton, delivered in South Dakota.*

Q.—Where did these second-hand rails come from?

A.—*From various parts of the system, principally from such lines as required heavier rails for the heavier traffic.* These sixty-pound rails were taken up from those lines, and the perfect rails were selected. They were sent to the rail mill where any little imperfections were removed, such as a kink at the end, and a small part of the ends were sawed off; they were re-drilled, straightened and put in first-class condition and then shipped out to South Dakota.

Q.—*How long had these rails been in use upon other portions of your system?*

A.—*Some seven years, some eight years,* more or less, I cannot tell you exactly.

Q.—And what weight did you say they were; did you say they were all sixty-pound rails?

A.—To the best of my knowledge they were all sixty-pound rails. (Pages 268-269).

The rails having been in use some eight years before being laid in Dakota would not weigh 60 pounds, as some wear must result from the use.

By reference to Mr. Earling's estimate of cost of maintenance on page 302, we find that he estimates the

annual rail renewal for the South Dakota lines at 6,488 tons, and that he allows as salvage for old rails taken out of the track 5,633 tons. This would indicate an annual wear of 855 tons. If these rails were in use for eight years there would, according to Mr. Earling, have been 6,840 tons worn away.

On the basis of 60-lb. rails, 94 tons 640 lbs. to the mile, for 1,101 miles, we have 103,719 tons less the 6,840 tons of wear, making 96,879 tons of relayer steel rails in the track. This makes a reduction in the quantity of 9,421 tons, and at the price figured on by Mr. Whittemore, $46.76, a reduction of $440,525.96 in value.

Mr. Whittemore has figured the value at $46.76. On page 401 he tells how he arrived at this valuation.

Q.—106,300 tons of rails, average cost $46.76, $4,970,627; is that correct?

A.—I believe it is. Shall I state how I arrived at that?

Q.—You may if you choose.

A.—I took the miles built certain years. I took the average price of rails paid during that year and multiplied the price paid each year by the tons used each year and when the aggregate was ascertained divided it by the number of tons, which gave $46.76 as the average price paid.

It is quite clear from the testimony that very little, if any of the rails used in the original construction are

now in the track, but that the track is now laid with relayer steel.

Consequently the prices paid 18 years ago for rails not now in use cannot be accepted as the basis for the present fair value.

Mr. Earling testifies (page 298) that this relayer steel has a known and fixed value, that when new rails sell at $29 these relayers would sell for about $20 or $22 per ton, and in his estimate of the relayer steel for renewal and repair he has figured the relayer steel at $24.50 in South Dakota and (page 297) he testifies that he calculates about $4.50 per ton freight, leaving the value exclusive of freight at $20 per ton.

Mr. Earling's figures are higher than they ought to be, because these old rails are not as valuable per ton as new rails, and Mr. Whittemore testifies (pages 413-414):

Q.—I notice that you estimate the average cost of these rails at $46.76 a ton?

A.—Yes, sir.

Q.—Do you know what the present market is?

A.—No, sir. I do not know. It has been all the way from *$18 to $25 in the last few months.*

Q.—And steel could have been had as low as $18 in the last year?

A.—Yes, sir.

Q.—And it is a fact, is it not, that work has been done in the past year at $20?

A.—Rails?

Q.—Yes, sir?

A.—Yes, sir; it is a fact.

If this is true, that new steel is only worth $18 to $20 a ton, then, according to Mr. Earling's testimony just quoted, where he estimates the value of relayer at 70 to 75 per cent. of the cost of new steel, then this relayer is not worth over $15 a ton.

At the close of each fiscal year the directors of the complainant make an annual report to the stockholders of the company. The annual report for the fiscal year ending June 30th, 1897, was offered in evidence by the complainant, with the agreement between counsel that the same may not be printed in the record but may be produced at the hearing. (Page 612).

Such portions of this report as we deemed of special value have been included in the printed record.

One of the many valuable things contained in this little volume is an inventory of "Material and Fuel on Hand," and is found on page 34 of the report and on page 716 of the printed record.

In that inventory we find this item:

Old steel rails, 16,065 tons, $173,947.01, which figures out $10.82 per ton.

That this refers to the relayer steel and is a valuation fixed by the officers of the company is clearly shown

by the testimony of the auditor, Mr. Winnie, (pages 43-44), as follows:

Q.—I see in your account of material on hand, on page 34, of your last annual report, an item: "New Steel Rails, 743 tons," with a certain sum set opposite that as representing the present value; that is what it is intended for, is it?

A.—Yes, sir.

Q.—That is, 743 tons of new steel rails are valued at $18,119.31?

A.—Yes, sir.

Q.—Those are rails now on hand to be used in replacing or construction, as the occasion may require?

A.—Yes, sir.

Q.—Are they in store at any particular place, or are they distributed over the system?

A.—They are probably quite well distributed over the entire system, so that in case of a breakage we will have one or two on hand.

Q.—"Old Steel Rails 16,065 tons," with a value indicated of $173,947.01. How is that value determined?

A.—That value is put upon them, based upon the price of new material. It is the price that is fixed by the managers of the company; and it fluctuates with the price of new material.

Q.—And at the rate there indicated being somewhere near $11 per ton?

A.—Yes, sir.

Q.—New rails are something like $24?

A.—I don't know the present quotation.

Q.—Old steel rails are rails that have been in use, are they?

A.—Yes, sir.

Q.—Describe the treatment which they receive, so as to give them any value?

A.—When new rails are put in, of course a corresponding length of old rail comes out. The old rails are sorted over and those that are fit to be used in places of lighter traffic or in side-tracks, without there being any labor expended on them, are put in one class at a valuation. Others of them have to go through our rail mill to be straightened and sawed and re-punched, perhaps, are put into another valuation, and still another class, that are not fit for use at all, are sent to the rail mill to be sawed up into lengths and sold as scrap. When the value of these three classes of rails is determined, that amount is credited to renewal of track, to the same account to which the new rails are charged. Of course, the old rails then become as though they had been purchased for money; they are a part of the material on hand.

That the valuation here disclosed was not an exceptional one, we go back to the annual reports for the

years 1894, 1895 and 1896, and find that the invoice for those years was as follows:

1894—6,236 tons, $95,495.04 or $15.31 per ton. (Page 713).

1895—8,957 tons, $105,404.02 or $11.76 per ton. (Page 714).

1896—11,248 tons, $152,008.98 or $13.51 per ton. (Page 714).

The average valuation for the four years would be $12.85 per ton.

This would include the freight or cost of distribution, as Mr. Winnie testifies that they are quite well distributed over the system at the time of the valuation,

We have made some inquiry in other directions and we lear from Mr. Cronk, clerk of the superintendent of the Dakota division of the Chicago & Northwestern Railway Company, that that company is using relayer steel in Dakota, and he testifies as follows. (Pages 913-914):

Q.—Can you state about the amount of iron and steel that has been used to replace and repair in South Dakota up to the present time?

A.—This would have to be from memory. I did not take any data. I can say this, that the line from Tracy to the state line, which is about forty-six miles, has since the beginning, since the line was built, been relaid and the steel that was taken up on this line, this forty-six

miles, has been used in repairs and replacement of the balance of the line, and also in construction of side-tracks. In addition to that, we have received some, I could not say how much, from other divisions.

Q.—Not a great deal?

A.—I could not say it was.

Q.—The rails for replacement and repairs have been supplied largely by this forty-six miles that was relaid?

A—Yes, sir; to a considerable extent. We received rails from the east to relay this part and took the rails from this line, from Tracy to Elkton, to lay on the balance. In addition, we have received several shipments of rails outside of that, but very little.

Q.—Do you know the price at which the Dakota divisions are charged by the Chicago & Northwestern Railway for these relayers?

A.—The price varies. Each year it is a different price. It runs anywhere from thirteen to a little over thirty dollars a thousand.

Q. —A ton you mean?

A.—Yes, sir; gross ton.

Q.—What was it the current year?

Mr. Kittredge: Objected to as incompetent and immaterial.

A.—This, you understand, is the price for second quality steel—thirteen dollars a ton.

Q.—When you say "second quality," you mean steel that has been used heretofore, I take it?

A.—Yes, sir.

It will be noted that the rails referred to by Mr. Cronk are being taken up between Tracy and Elkton on the Dakota division and taken to the James River line north of Huron on the same Dakota division, so that the valuation is the value delivered on the Dakota division.

It is difficult to name an exact figure as the value of this steel varies from year to year, but it would seem to be fair to take an average of the valuation fixed by the officers of the complainant for the four years as the present fair value. This we found to be $12.85 per ton, or within fifteen cents of the valuation fixed by the Chicago & Northwestern company.

The issue is, what is the present fair value. What the rails may have cost eighteen years ago can have little weight and certainly where the rails purchased eighteen years ago have disappeared and are not now in the track it would seem that the price paid at that time can have no influence whatever.

Complainant has not offered any testimony whatever directly tending to show the present fair value of the rails in the track. The only testimony on this subject has been offered by the defendants, either direct or by cross-examination.

Our contention is, that this rail item should be fig-

ured according to the fact, that is to say, 96,879 tons of old steel rails at $12.85 per ton, $1,244,895.15.

This means a reduction of this item of $3,725,731.85, or $3,383.95 per mile of road.

In addition to the foregoing, there must be an allowance made for the rails in side-tracks. It is undisputed that the rails for side-tracks are not as valuable as those in main track. They are usually old rails and in most cases they are iron rails.

It will be fair to allow eighty tons to the mile. There are 86.15 miles of side-track. This will make 6,892 tons, and, allowing $12.85 per ton, amounts to $78,562.00.

We have been more than fair in estimating the quantity of rails, because we have assumed that the entire mileage in the state was laid with 60-lb. relayer steel. This is not the fact, as we find by the testimony of Maurice Corinell, a section foreman on complainant's line in South Dakota, that the relayer steel on his work is 56-lb. (page 742), and doubtless more of the 56-lb. could be found in the state. He also testifies that these relayers are dated 1875. Prof. Whitney found relayers dated 1875, 1880 and 1883. (Pages 843-4-5-6).

The railway companies do not keep rails stacked up. These rails have been in use somewhere during these years, and hence we must conclude that Mr. Earling is mistaken when he said this relayer steel had been in

use seven or eight years, as it is evident that it has been in use from fifteen to twenty-three years.

Cross-Ties.

3,562,000 cross-ties means 3,000 ties to the mile of road. The rails are 10 yards long and there are 176 rail lengths to the mile. This estimate is based on 17 ties to the rail.

Mr. La Follette, one of the defendants, testifies that he has counted ties at various points in the state and his testimony is as follows, (page 815):

"I have counted the ties under the rails at perhaps twelve or fifteen stations, or near them, and I found the ties varied from fourteen, fifteen, sixteen and seventeen, and occasionally as low as thirteen, so that I should say that the average rail, I think, would have fifteen or fifteen and one-half ties to the rail."

Prof. Whitney testifies, (page 840):

Q.—Have you investigated the subject of the number of cross-ties to the mile?

A.—Yes, sir.

Q.—How have you obtained your data for that computation?

A.—The result of the inspection I made of the line; and I differ in the total amount of cross-ties on the South Dakota lines from this quantity, 3,562,000, which is based on 3,000 ties to the mile. My observation indicates pretty clearly that about 2,816 ties—sixteen ties

to the thirty-foot rail—is the condition of the track.

It will be noticed that the complainant has not produced any direct testimony on this subject, but rests the issue on Mr. Whittemore's estimate.

Against this estimate we have the positive testimony of witnesses who are testifying from actual count, and the Court by looking at Exhibit 50, page 674, can count the ties under two rail lengths and find fifteen ties to the rail.

Taking Prof. Whitney's estimate of 2,816 ties to the mile, we find that the total (including side-tracks) does not exceed 3,342,592, or 219,408 less than Mr. Whittemore's estimate.

The Pattersonville extension account covers 246 miles of road. On the basis of sixteen ties to the rail it would require 692,736 ties, (page 841), and we find that the amount charged in that account for ties was $203,358.34. (Page 760).

Mr. Whittemore says that the ties were worth 30 cents each at the time the road was constructed. At 30 cents each, $203,358.34 would pay for 677,861 ties, or a little less than the number which sixteen ties to the rail would make.

This is a strong corroboration of our claim that the ties do not exceed sixteen to the rail.

Mr. Whittemore estimates the ties at 30 cents each, and later on makes an additional charge for the freight

on the ties. Railroad ties have a market value, and it would have been quite an easy matter for complainant to have proven the market value of cedar ties such as are in use on the Dakota lines.

We find by the invoice contained in the annual report for 1897 that 843,298 ties are valued at $233,677.15, or a fraction over 27 cents each. This lot of ties undoubtedly contains oak, cedar and hemlock, and it would hardly represent the value of cedar ties as they are much cheaper than oak. Mr. Cronk testifies that the C. & N. W. charge the Dakota division 21 cents for cedar ties. (Page 911).

Why is it that the complainant withholds its records and fails to show what it pays for these ties and how much it charges the Dakota lines for ties?

Undoubtedly the C. & N. W. charges the Dakota divisions the actual amount expended, 21 cents per tie.

This may not be the most satisfactory proof of the value of ties, but it is the best to be found in the record of this case. Mr. Whittemore's estimate is based upon prices prevailing eighteen years ago when the lines were constructed. Mr. Earling testifies that ties will not last more than ten years, so on that theory the original ties have entirely disappeared. The freight on the ties is included in the item of freight on track material, and hence we are now dealing with the value exclusive of freight.

Allowing complainant the number of ties actually found in the track, 3,342,592, and allowing the value as fixed by the C. & N. W. Ry., 21 cents, we find that the tie item should read: "3,342,592 cross-ties @ 21 cents, $701,944.32."

Track Laying.

The next item of importance is the item, 1,187.21 miles track laid and surfaced @ $450, $534,244.00.

In regard to this item, Mr. Whittemore testifies, (page 402):

"That is estimated as being a proper expense for that work at that time, and even it would be to-day."

Q.--On what basis did you estimate it; how did you reach that sum as the cost of laying and surfacing the road?

A.--I combined two items there, the cost of laying and the cost of surfacing, and it was about the price paid for a similar class of work when it was constructed, and it represents, as I believe, the actual cost of doing such work.

On cross-examination the witness was asked to separate these items, and his testimony is as follows, (pages 416-417):

Q.—Let me ask you if it is not a fact that at the present time in the track work, this labor of surfacing and track laying is usually figured at $300 a mile?

A.—It was at that time, but it does not comprise what I have comprised in my estimate. I wish to explain the manner of track laying. In the first place, suppose you have a contractor doing this work at say $300 a mile, or whatever it is; you run the material out to him, which I have put in here at $140 a mile, the cost of moving the material. He will get that and perhaps drop the surfacing, I do not know of any track laying or surfacing at $300 a mile. He leaves it and goes off, he is moving ahead, and the company has to keep that track intact, in order to keep materials moving ahead. If he does the surfacing, he shovels from the side of the track, shovels the earth from the side of the track and by that means leaves sort of a slack shoulder there. He has done this part of the work, but the track in the rear of him has to be maintained for the operation in moving materials ahead. Immediately behind the contractor, after he has left his work, the company has to put on a gang of men, who take the place of section men, put them on and keep them on there. That is paid for and may cost $100 a mile or more, and shoving material ahead $140. That charge I state in here is intended to be a conservative estimate to cover all these expenses.

Q.—That, you say, you figure at $140 a mile?

A.—No, sir.

Q.—That was for the delivery of material?

A.—Shoving material ahead from our store.

Q.—But what proportion of the $450 would that constitute?

A.—What would it constitute?

Q.—This work that you spoke of after the track laying?

A.—Well, it depends altogether on the length of the line that you are operating from your headquarters. It may be—I should say average $75 and perhaps $100 a mile. It is a matter of judgment, if you please.

So that Mr. Whittemore has figured the track laying at from $350 to $375 per mile, and $75 to $100 for surfacing.

By reference to the Pattersonville extension account on pages 762 and 763 we find the contractor was paid $240 a mile between Pattersonville and Mitchell, S. D., and $240 a mile between Marion Junction and Running Water, and $210 a mile between Mitchell and the Missouri River (Chamberlain).

It is difficult to harmonize Mr. Whittemore's statement, that he has figured on the basis of prices paid at the time the road was constructed, with the facts disclosed by this Pattersonville extension account. According to this account, $240 was the highest price paid and this included the surfacing.

Prof. N. O. Whitney was called by the defendants as an expert witness on these matters. He is at present the

professor of civil and railway engineering at the University of Wisconsin. His testimony, showing his qualifications, is as follows, (page 838):

Q.—Just give a short statement in your own language of the work that you have done from that time to the present in your profession?

A.—I was about six months in the chief engineer's office as draftsman and about a year on the construction on the Pittsburg, Virginia & Charleston branch of the Pennsylvania Railway upon the Monongahela river; then locating engineer on the Mexican National Railway in Mexico for nearly a year and a half; surveyed and located 300 miles of the Mexican National Railway; then for about four years locating engineer and resident engineer on construction on the South Pennsylvania Railway in Pennsylvania, where I located some forty miles of that line; then for about five years as assistant to the chief engineer of the Pennsylvania company, with headquarters at Chicago, during which time I located and built three small lines of the Pennsylvania system in the neighborhood of Chicago—the South Chicago & Southern Railway, the Calumet river line and the State Line & Indiana City Railway; then from the fall of 1891 till the present time I have held the chair of railroad engineering in the University of Wisconsin.

And on page 856 he testifies that he is a member of

the American Society of Engineers, (has since been elected vice-president), the Western Society of Engineers, the Railway Club of Chicago, and the society for the promotion of engineering education. He appears in this case without interest, prejudice or bias, and with but a single controling influence—his professional reputation.

On page 840 he testifies in regard to this item of laying track:

Q.—I call your attention to the item of $450 a mile for track laid and surfacing, and ask if you are familiar with the cost of such work ordinarily?

A.—Yes, sir.

Q.—I will ask you what in your opinion is a fair value to place on that service or labor?

A.—The estimate which I have made for that item places the cost at $240 per mile, instead of $450, based on the cost of that work in the Pattersonville extension, as submitted by the company.

Q.—You have examined this statement of the cost of constructing this Pattersonville extension, have you?

A.—Yes, sir.

Q.—And you found from your examination that the charge has been $240 per mile east of Mitchell?

A.—Yes, sir. Portions were put down at $240 per mile and portions at $210. I took the $240 for track laying and surfacing.

Q.—And from your knowledge and experience in railway work, would you say that $240 was a reasonable allowance for that work?

A.—Yes, sir.

And on cross-examination, he testifies, (page 864):

Q.—You say the contract price in there is $240?

A.—$210 and $240. There are two separate contracts.

Q.—What does that service include?

A.—This work I have described.

Q.—So that includes the surfacing?

A.—Yes, sir.

Q.—Are you sure about that?

A.—Yes, sir; it is mentioned.

If we estimate this item at the highest price actually paid, the item would read: "1,187.21 miles track laid and surfaced @ $240, $284,930.40."

Track Ballast.

There is no evidence that 267 miles of the track or any other portion of it is ballasted.

It would have been an easy matter for the general road master to have given us the number of miles ballasted and a description of the ballast, so that the item could be investigated. As it now stands the item must be rejected. Especially so, when we consider the testimony of Roadmaster Nelson that the ballast has not been maintained.

His testimony on that point is as follows, (page 734):

"Well, it was ballasted with gravel about ten or eleven years ago."

Q.—Has that been maintained?

A.—No, sir; it is worn out now.

Highway Crossings.

Mr. Whittemore estimates 1,200 crossings and allows 240 feet to the crossing.

He says with reference to the number of crossings, "That is in a degree estimated." (Page 418).

This number would place crossings at every point where the line of road is intersected by a section line.

Theoretically every section line is a highway, but as a matter of fact we know that in a sparsely settled prairie country every section line is not used as a public highway, and it is doubtful if over one-half are provided with crossings.

There simply isn't any evidence before the Court as to the actual number of these crossings, and strictly speaking we might object to the item, but we are willing to concede 500 crossings, because Mr. Whittemore on page 404 testifies as follows:

Q.—1,000 cattle guards, estimated at $10 for each cattle guard, $10,000; is that a correct item?

A.—I believe that is a correct estimate. We have 500 highway crossings and I put that in as certainly that much.

And on page 418:

Q.—1,000 cattle guards, is that an actual number or estimated number?

A.—That is an estimated number. To ascertain the number of cattle guards multiply crossings by two.

On page 618 Mr. Earling gives the only description of these crossings to be found in the record:

Q.—The ordinary highway crossing in South Dakota outside of the cities and towns is constructed by placing four planks, one upon each side of the two rails, and spiked down to the ties, is it not?

A.—The less important crossings are so constructed. The more important ones are planked clear across, that is, from rail to rail, inside, and there is usually one plank on the outside of each rail.

Q.—There are no extra timbers placed in the track aside from the planking to make the crossing?

A.—Nothing more than is required to furr up on the ties so as to bring the planks on a level with the rails.

Mr. Whittemore's estimate amounts to $4.80 per crossing, while Mr. Earling on page 301 estimates 200 crossings at $624, or $3.12 per crossing. Allowing 500 crossings at $3.12 each, the item would amount to $1,560.00.

Cattle Guards.

Mr. Whittemore admits that the number is not actual but estimated. By actual count the defendants

found that there really were but 221 cattle guards in the state.

Roadmaster Nelson says there is but one between Milbank and Aberdeen. (Pages 819, 820-893-731).

Accepting Mr. Whittemore's valuation, the item should read: "221 cattle guards at $10 each, $2,210."

Some of these items are not of sufficient importance, so far as this case is concerned, to justify the consideration we have given them, and we have only done so in order to show that the estimate has been carelessly made and is generally unreliable. The testimony of Prof. Whitney, on cross-examination, is interesting on this feature of Mr. Whittemore's estimate. On page 865 he testifies:

Q.—How about getting these supplies up to the front from the depot?

A.—In what respect?

Q.—Is that included in the estimate?

A.—No.

Q.—Now, what is the expense to the railroad company of doing that work?

A.—I don't know—Mr. Whittemore adds $140 a mile for that work.

Q.—Well, what do you say about that?

A.—I have already stated about that I believe.

Q.—You think that that is fair, do you?

A.—I said I had no means of checking that because

the center of supply was unknown to me, and therefore I could not check it; it seems high. I think it has been stimulated as a good many items there, probably, have been, but cannot be shown.

Q.—You don't dispute that item?

A.—I have no means of doing it—no.

Q.—So, then, to the $240 you add $140 per mile, do you?

A.—I add $140?

Q.—Isn't it right to add the $140?

A.—No.

Q.—Didn't Mr. Whittemore, in his estimate of $450 per mile, include the cost?

A.—No.

Q.—Are you sure about that?

A.—He has two separate items there, one is for that and one is for track laying.

Q.—Now, where is that?

A.—Page 423 of the record, 1,187.21 miles of track laid and surfaced at $450; then three lines below is 1,101 miles of material which was moved to the front from the nearest point of distribution at a cost of $140. This is the item I have no means of checking, and I so stated in the direct examination. I was going to say I think that item is large, but I have no figures to check it by.

Q.—Then you think Mr Whittemore is incorrect in his estimate of these two items, do you?

A.—Which two?

Q.—The two items of which we are talking?

A.—I think so; yes. The first is incorrect evidently, by the evidence I have submitted—the $140 I think is padded, but I have no means of showing it.

As a further illustration of the recklessness with which this estimate has been thrown together, Mr. Whittemore estimates 505 miles of right of way fenced at $280 per mile, $141,400.00. On this he testifies on page 404:

Q.—505 miles of right of way fenced, $280 per mile, $141,400?

A.—I get that 500 miles of right of way fenced from the general superintendent informing me what road is not fenced, and I take the price of the fencing—

And again on page 418:

Q.—That is your charge for two cattle guards for each mile of track on the right of way which is fenced?

A.—That is it, I think.

And yet we find by actual count that there are only 221 cattle guards in the state. On this basis there would only be 110.5 miles of right of way fenced, and the item would only amount to $30,940.00.

Freight and Transportation of Men and Materials.

These five items amount to $2,532,035.00, or $2,133.14 per mile of road (1,187 miles).

On pages 419-420 Mr. Whittemore gives an explanation of these items, as follows:

Q.—The freight on track material was estimated from Chicago, was it?

A.—I will show you how we arrive at that. Rails, splices, spike is hauled from Chicago to Mitchell, 655 miles; we call it 650 miles; 106,300 tons of rails hauled 650 miles at ¾ of a cent per ton per mile amounts to $518,212.50; 8,360 tons of splices hauled 650 miles at ¾ of a cent per ton per mile, $40,755.00; 4,155 tons spike hauled 650 miles at the same rate, $20,255.63; 391,800 tons cross-ties hauled from Milwaukee to Mitchell, 570 miles, called 600 miles, 391,800 tons of cross-ties averaging 220 pounds per tie hauled 600 miles at ¾ of a cent per ton per mile, $1,763,100.00; total estimated freight on track material, $2,342,323.13. I don't know whether those are the figures in this estimate or not; the cents I have left off.

Q.—And from what point was the freight on bridge and culvert material estimated?

A.—I took the timber and piles, assumed haul from Portage in Central Wisconsin to Mitchell, 529 miles, and called that 500 miles. Truss bridge material assumed hauled from Milwaukee to Mitchell, 570 miles,

called 600 miles; all this material did not come from this place, but I assumed what I thought was an aggregate haul or an average haul rather for each material. There is 16,500 tons in trestle bridges and culverts hauled 500 miles at ¾ of a cent per ton per mile, $61,875. 700 tons of material in truss bridges hauled 600 miles at ¾ of a cent per ton per mile, $3,150. 11,690 tons of piles, estimated at fifty pounds per lineal foot, hauled 500 miles at ¾ of a cent per ton per mile, $43,837.50; making a total estimated amount of freight on bridge material, $108,862.50.

Q.—The freight included in your account amounts to very close to $2,000 per mile?

A.—Yes, sir.

Q.—You say the ties are estimated on the weight of about 220 pounds each?

A.—Yes, sir.

We have shown that there are only 103,771 tons of rails. We here find that Mr. Whittemore has figured 220 pounds per tie on his estimale of 3,562,000 ties. The actual number is 3,342,592. On this basis the freight amounts to 49.5 cents per tie. Evidently Mr. Whittemore is mistaken in his estimate, as we find that the freight on ties for the Pattersonville extension amounts to $193,222.07 (page 760), on the basis of one cent per ton per mile. Reduced to the ¾ cent per ton per mile (Whittemore's rate), it would amount to $144,-

916.55. This sum amounts to 20.9 cents per tie on 692,736 ties. (Page 841-842).

Mr. Earling, in his estimates, testifies that the freight on ties to Dakota amounts to about 20 to 22 cents per tie. (Page 298).

Mr. Whittemore also charges $66,000 for transportation of men to the work. The only testimony to support this item is the following testimony of Mr. Whittemore, (page 841-842):

"I estimate that we, during the six or seven years that that work was going on, transported to South Dakota about six men to the mile. That would make 6,600, and that these men were recruited and sent an average distance, that is to say, from Chicago to Mitchell, 650 miles; Milwaukee to Mitchell, 570 miles; Minneapolis to Mitchell, 415 miles; making the average distance about 500 miles, and at 2 cents a mile it would make $10 apiece, the cost of transporting these men.

Q.—That would not include the transportation of the men east again?

A.—No, sir.

Q.—That would just simply take them to their work?

A.—It may include those same men two or three times over. It only gives less than 1,000 passes a year, you see.

There is no evidence that complainant ever transported any laborers, or contractors' tools and teams to

Dakota free of charge. It does appear that the grading and track laying was done by contractors, but it does not appear that complainant was under obligation to furnish transportation.

Some of the men who worked on these roads may have rode to Dakota on passes, but no such charge appears in the Pattersonville extension account, and it appears that the company has no record of the transaction. (Page 419). So that this charge is simply a guess and should be rejected.

From the best information to be obtained from the record in this case these freight items should not exceed the following estimate:

103,771 tons rails
8,360 " splices
4,155 " spikes

116,286 tons, 650 miles at ¾c	$566,894 25
3,342,592 ties, at 20.9c	698,601 72
Bridge material	108,862 50
	$1,374,358 47

This amounts to about $1,158.00 per mile. The total freight charge of the Pattersonville extension was $398,492.54. (Page 760). This amounts to a little over $1,600.00 per mile. Reduce this from the 1 cent per mile rate to Mr. Whittemore's rate of ¾ cent per mile and it amonnts to $1,200.00 per mile. (Page 841).

This proves our estimate to be very nearly correct.

In making this estimate we have used the rate (¾c T. M.) used by Mr. Whittemore, for the sake of uniformity and comparison. This is equal to a charge of $4.875 per ton from Chicago to Mitchell, S. D.

Mr. Earling, in his estimate, figures freight at six-tenths of a cent per ton per mile. This would amount to $3.90 a ton from Chicago to Mitchell.

If we use Mr. Earling's rate, it reduces the freight charge just 20 per cent., and it would then amount to $1,099,487.00.

Railroad material such as we have been considering is a very low class of freight and ought to be transported as cheaply as any freight that is hauled. In the western classification it is classed as fifth class. This class is the lowest in the classification and is the same as class "E" on Exhibit 68, page 801.

Ehibit 68 is the maximum tariff governing local freight, and the rate on class "E" for 650 miles would be 27 cents per hundred pounds, or $5.40 a ton.

This would be the maximum rate measured by the highest rate sheet in existence on complainant's railway system. We find that complainant's regular rate on coal from Chicago to Mitchell is $3.35 per ton. (Page 810).

It is difficult to see why complainant should insist upon a greater freight charge for the purposes of this

case than it does for hauling hard coal, and we contend that to allow this item on the basis of Mr. Earling's estimate, $3.90 per ton, is certainly fair.

Buildings, Etc.

The next item of importance is the one relating to the cost of buildings, etc., $940,606,00.

Mr. Whittemore has taken these figures from an estimate made by Mr Bates, and we turn to the testimony of Mr. Bates for an analysis of the item.

Mr. Bates testifies that he occupies the position of engineer of bridges and buildings. He testifies that he prepared Exhibits 26 and 27 (pages 480 and 486), as follows, (page 456):

Q.—How did you arrive at the statement of the cost of the buildings and structures in South Dakota, which you furnished Mr. Whittemore for his testimony?

A.—I went over that in detail, with my assistant superintendent, who was formerly chief carpenter of the Southern Minnesota division, our architect who makes the plans and was supposed to be familiar with the cost of these structures, the chief clerk and his assistant, who kept the record of costs, and we placed the cost on each separate item of building.

On cross-examination, he admits that he has no personal knowledge of the buildings in South Dakota. His examination on this point was as follows, (page 460):

Q.—I notice a uniform charge running through this statement of $75 per station for out-houses?

A.—Yes; I took that as a unit for station out-houses and put them in at $75 each.

Q.—You did that without any definite knowledge of this, of exactly what they did cost?

A.—I know what our station out-houses cost now, and I could give a pretty close guess as to the cost of an out-house when we build them as we do now; when we build them in our shops and ship them out. There is a great deal of uncertainty as to the cost of an out-house. It depends upon the cost of the house itself and the size of the hole you set it over, and that of course would cost something.

Q.—Do you know, as a matter of fact, the dimensions of the out-houses in South Dakota?

A.—No, I do not.

Q.—So this is not based upon an actual estimate of the houses actually on the line in South Dakota?

A.—I do know that the out-houses that were commonly built at the time I came here were more expensive than those that we now build. I feel sure I was within the inside figure when I took the item of $75 for an out-house erected and in place.

Q.—But the estimate of $75 is not based upon actual knowledge upon your part, as to the dimensions of those out-houses?

A.—No, sir.

Q.—Is it not?

A.—No, sir; it is not.

On pages 462-463 the following:

Q.—This station for which you have produced plans and specifications, is what you call a standard station, is it?

A.—Yes; and that corresponds to the estimate of $2,500 given in those figures there, being the most expensive of stations at other than junction points.

Q.—What is the dimensions of this station?

A.—Twenty-four feet wide and seventy feet long.

Q.—And does it cost $2,500 to construct such a station at this time?

A.—Yes, sir; as near as I can estimate it, $2,500; I know of such stations having been built for $2,500 and even for more.

Q.—I will ask you if you ever made an estimate from the plans and specifications of this station within the last three months, applying the present market value of material?

A.—No.

Q.—You have not?

A.—No.

Q.—How long since you made such an estimate?

A.—I do not remember; it has been a good while since we have built such a station as that, in fact, I do not

recall when we have built any on that plan. Not since the Kansas City line was completed.

Q.—It is possible, is it not, that you have never made an estimate upon that plan?

A.—Not a detailed estimate figuring the cost prices of lumber, material, nails, and so forth.

Q.—You were not in charge of the construction of buildings at the time of the construction of these lines in South Dakota, were you?

A.—No, sir.

Q.—You have no personal knowledge of what those buildings cost at that time?

A.—No; with one exception; I noticed, in looking up the records, that the contractor was allowed $2,500 for one of those stations that he did not build.

Q.—That is, there was $2,500 deducted from his pay for one station that he did not build?

A.—Yes, sir.

Q.—I understand you to say that your relation with the company began in 1888?

A.—Yes, sir.

Q.—At a time after all these lines in South Dakota were constructed?

A.—Yes, sir.

And on page 467:

Q.—Do you know what the present cost of a twenty-foot Eclipse mill is?

A.—I do not, we have not been using them recently.

Q.—Neither do you know what the original cost of the Eclipse mill was of your own knowledge?

A.—Well, no; but I looked it up and found out what it was.

Q.—Where did you look it up?

A.—We could find that; we have old accounts which would show. My chief clerk would look up a thing of that sort and I would scarcely know where he got it.

From the foregoing it will be seen that Mr. Bates has made an estimate of the cost of the Dakota buildings without knowing very much about it.

We will now examine the estimate in detail:

The following is a summary of the items contained in Exhibits 26 and 27:

74 Standard Stations, @ $2,500		$185,000
32 Station Houses, @ $150 to $2,250		30,950
13 Engine Houses, etc		168,050
28 Engine Coal Stations		64,000
Water Stations—		
Buildings, machinery, etc	$35,612	
45 wells	23,020	
55 tanks, @ $1,500	82,500	
46 wind-mills, @ $650	29,900	171,032
Station Platforms		36,305
41 Coal and Oil Houses, @ $100		4,100
98 Out-Houses, @ $75		7,350
Stock Yards		70,630
125 Tool Houses, @ $65		8,125
32 Section Dwellings		30,525
31 Ice and Cold Storage Houses		16,995

16 Turntables		31,600
8 Cinder Pits		2,800
4 Track Scales, @ $1,000		4,000
Passenger Station at Sioux Falls	$13,000	
" " Aberdeen	6,000	
" " Yankton	3,750	
" " Madison	3,300	
" " Running Water	2,700	
" " Mitchell	2,600	31,350
Freight Houses, Sioux Falls	$9,000	
" " Aberdeen	2,200	
" " Mitchell	1,500	
" " Milbank	900	
" " Chamberlain	5,400	19,000
Sundry items to balance		58,794
		$940,606

74 Standard Stations.

The first item is 74 standard stations. Exhibit 43 Page 667 is a view of one of the standard station houses alleged to have cost $2500.

It will be remembered that Mr. Bates was the only witness called by complainant on the cost of these buildings and that he admits that he never made an actual estimate of the cost to construct one of these standard stations. (Pages 462–3.)

Mr. Bates furnished us with a set of the plans of a standard station which we placed in the hands of a competent contractor and builder. Mr. R. J. Booth was called as a witness for defendants and having testified as to his qualifications as a mechanic and builder, he

says that he examined some of the stations alleged to be standard stations and that from his examination of the buildings and from the plans placed in his hands he prepared an estimate of the cost to construct such a building on the basis of the cost of materials in South Dakota. Exhibit 51, page 685, is such estimate in detail. It will be noticed that he has estimated the actual cost at $1,461.52, and adding 10 per cent. for contractor's margin it makes a total of $1,601.52.

He further testifies, (page 687):

Q.—In making your estimate upon these standard depots, did you make the estimate with reference to the construction of a single building, or did you make it with reference to the construction of a series of such buildings?

A.—I made it with referenee to the construction of one building. If I had a contract on a number, I could make a lower estimate.

Q.—And if you had a contract for the construction of seventy-two of such buildings at the several stations of the complainant railway company in South Dakota, you think you could construct them for less than this estimate?

A.—Yes, sir.

Q.—And how much less, do you think?

A.—I think about eight per cent. less.

This is direct and positive testimony. Complainant

has made no effort whatever to dispute this testimony, not even to the extent of recalling Mr. Bates.

On this basis 74 standard stations would cost $118,-512.48. Mr. Booth says if he had a contract to construct 74 such buildings he could do it for eight per cent. less than his estimate for a single building. This would reduce the cost to $109,031.49.

32 Station Houses.

The next item, 32 station houses, costing from $150 to $2250.

We of course could not make detailed estimates of all the buildings. It was the duty of complainant to show the value of these buildings by competent testimony, and we only go far enough in this direction to show the court the fact that Mr. Bates' figures are wide of the mark and unreliable.

Of these 32 station houses we have made estimates of two of them, one at Harrisburg and one at Vilas.

The one at Harrisburg is estimated by Mr. Bates at $1,050, (page 492). Mr. Booth estimates this station house at $561.92, (page 679, Exhibit 39).

Exhibit 50, page 674, is a view of the station house at Vilas. Its cost is stated by Mr. Bates at $1800, (page 513), while Mr. Booth places its cost at $945, (Exhibit 40, page 680).

13 Engine Houses.

We have made estimates on four of these engine houses.

The one at Sioux Falls is shown in Exhibit 49, page 673. Its cost is stated by Mr. Bates at $5,500, (page 493). Mr. Booth's estimate is $3,153.

The cost of the one at Mitchell is stated by Mr. Bates at $28,000, (page 501). Mr. Booth's estimate is $16,187.

The cost of the one at Woonsocket is stated by Mr. Bates at $4,500, (page 503). Mr. Booth's estimate is $2,373, (page 678).

The cost of the one at Egan is stated by Mr. Bates at $6,000. (Page 512). Mr. Booth's estimate is $2,505.00. (Page 677).

28 Engine Coal Stations.

We have estimates on four of the stations and the comparison is as follows:

	BATES.	BOOTH.
Egan	$2,700	$1,784
Woonsocket	1,800	1,257
Sioux Falls	2,600	1,322
Mitchell	3,000	1,896
	$10,100	$6,259

Water Stations.

It will be noticed that there are 55 water tanks, the cost of which is stated by Mr. Bates at $1,500 each. Mr. Bates testifies concerning these tanks, on cross-examination, as follows, (page 466):

Q.—What is the dimensions of the water tanks?

A.—Our standard water tank is 16x24; that is, the staves are sixteen feet long and the tank is twenty-four feet in diameter.

Q.—And what is the capacity?

A.—50,000 gallons.

Q.—These water tanks were constructed and placed upon the lines in South Dakota prior to the time you took charge of this department, were they not?

A.—Yes; with possibly a few exceptions.

Q.—And you do not know of your own knowledge the cost of those tanks?

A.—Not of those particular tanks; no, sir.

And page 468:

Q.—Do you know what the present cost of these water tanks is?

A.—We have a list of material and labor at $1,240 each; I put them in my list at $1,500.

Q.—That is an estimate on your part?

A.—Yes, sir.

Q.—What height of stand is used, about?

A.—About ten feet posts; the height of those tanks as a rule is determined by the spout to deliver the water into the tenders of the engines.

Q.—You think about a ten-foot stand?

A.—Yes, sir.

Q.—Do you know what the cost of these stands are estimated at?

A.—No.

Q.—Are you familiar with the tanks constructed by the Fairbanks-Morse company?

A.—Not especially, because we build our own tanks. Since I have been here we have built all of our own tanks.

Q.—I show you a catalogue and ask you to state the price of a tank as indicated there, 16x24, with rivited hoops?

A.—Price, with riveted hoops, $500; *you understand there is a large discount on this*, but at the same time it is proper to consider that the frost proofing adds very largely and I do not think that is counted there.

Q.—The frost proofing for a twenty-four foot diameter tank is how much, as shown by this catalogue?

A.—That is a frost proof roof. It would seem that the addition would be $190 on the list price additional for the frost proof roof. This (referring to cut showing boxing under tank) ought to be frost proof. That is very expensive work; I think with our standard frost proofing, there are four different thicknesses of boards with air spacing between each one of them, and that is not included, I believe.

It is hard to understand how Mr. Bates figures tanks at $1,500.00, when the list price is only $500, and that subject to a *large discount.*

Mr. Booth has made an estimate of the cost of these

tanks in place, and finds that he can construct them for $988.00.

Mr. Bates figures 46 wind-mills at $650 each.

Mr. Bates testifies concerning these mills (page 466), as follows:

Q.—What style of a wind-mill is in use?

A—Most of those mills out there are the Eclipse wind-mills.

Q.—What size?

A.—I think the twenty-foot mill is the most common.

Q.—They are uniform in size, are they?

A.—I think that there were some twenty-four foot mills, but I am not sure of that. We have had occasion to buy other sizes; in my time we usually bought the twenty-foot mill.

Q.—Do you know what the present cost of a twenty-foot Eclipse mill is?

A.—I do not, we have not been using them recently.

Q.—I show you a price list of Eclipse mills and ask you to examine it and ascertain what the present market price is of a twenty-foot Eclipse mill?

A.—I would have to go to the Eclipse people to find that; if there is a price list in here there would probably be a very *large deduction or discount.* You see they have a list price of $450; that does not include the tower; there is the cost of the tower and the erection and transportation that would be added to that.

Exhibit 46, page 670, is a view of a tank and mill. There must have been a large discount, as we find that the amount paid for wind-mills in the construction of the Pattersonville extension was $300. (Page 761).

Mr. Booth estimates these mills, including the tower, at $370.00.

We have estimates on four water stations and the comparison is as follows:

	BATES.	BOOTH.
Egan tank	$1,500	$988
" mill	650	370
" steam pump	700	365
" pump house	250	125
" well	250	140
Woonsocket tank	1,500	988
" mill	650	370
" well	750	750
Sioux Falls tank	1,500	988
" " mill	650	470
" " pump house	200	60
" " pipes and sewerage	250	250
Mitchell tank	1,500	988
" pump house	300	192
" pump comp.	500	500
" well	600	600
" piping	1,800	1,500
	$13,350	$9,644

41 Coal and Oil Houses

Forty-one coal and oil houses, the cost of which is stated by Mr. Bates at $100 each. Exhibit 45, page 669, is a view of one of these buildings.

They are estimated by Mr. Booth at $58 each.

Ninety-eight out-houses at $75 each. Exhibits 47 and 48, pages 671 and 672, are views of sample out-houses.

Mr. Booth estimates these at $32 and $21.

Stock Yards.

Mr. Bates testifies that he has estimated stock yards at 7 cents a square foot of enclosure. This is upon the theory that the yards are paved or planked, yet he does not know whether any of the yards in South Dakota are paved or planked. (Page 459).

The following is a comparison of the estimates made by Mr. Bates and Mr. Booth on some of the stock yards:

	BATES.	BOOTH.
Egan	$300	$167.00
Woonsocket	900	670.00
Harrisburg	375	149.25
Sioux Falls	150	90.00
Mitchell	1700	700.00
	$3,425	$1776.25

Tool Houses.

One hundred and twenty-five tool houses at $65, $8,125.50. Booth estimates these buildings at $40 each, making this item $5,000.

Exhibit 44, page 668, is a view of one of these tool houses.

We have no estimates on section dwellings.

Ice and Cold Storage Houses.

The following is a comparison of the estimates made by Mr. Bates and Mr. Booth:

	BATES.	BOOTH.
Egan	$400	$232.00
Woonsocket ice	300	177.00
" cold storage	960	None there
Sioux Falls	450	181.00
Mitchell ice	1,000	601.52
" cold storage	350	177.60
	$3,460	$1,369.12

Turn-Tables.

Mr. Bates has stated the cost of the iron tables at $3,000, and the wooden tables at $1,500 each.

The turn table at Mitchell is estimated at $3,000 by Mr. Bates. We find on page 28 of the annual report for 1894, that this table was reported to the stock holders as having cost $688.17, (page 713). Mr. Booth estimates it in place at $1,634.

The turn table at Sioux Falls is estimated at $1,500 by Mr. Bates. Mr. Booth estimates it at $894.

Mr. Bates in his estimates has figured the passenger station at Sioux Falls at $13,000.00 and the freight house at Sioux Falls at $9,000.00. The buildings were constructed in 1894 and are reported in the annual report for 1895, on page 25, as having cost $6,414.15 for the passenger station and $5,697.50 for the freight station.

Mr. Booth's estimate on these buildings was $7,191 for the passenger, and $4,714 for the freight station.

The round-house, or engine house, at Aberdeen, is estimated by Mr. Bates at $30,000. (Page 510).

It is reported in the report for 1888, on page 21, as having cost $6,484.21.

The turn-table at Milbank is estimated by Mr. Bates at $3,000 (page 524), and was reported in the annual report for 1892 as having cost $1,138.53. (Page 710).

The station house at Summit is estimated by Mr. Bates at $1,200 (page 519), and is reported in annual report for 1896 as having cost $975.78. (Page 714).

Mr. Bates testifies that they have a standard water tank, 16x24, holding 50,00 gallons; that he has a list of the labor and material for the construction of these tanks, showing their cost to be $1,240 each (page 468), yet we find from the annual report for 1897, page 33, that a water tank at Sanborn, Iowa, is reported as having cost $500. (Page 715).

This corresponds very closely to the list price of Fairbanks-Morse company of $500, subject to a large discount.

It is impossible to arrive at any satisfactory conclusion with reference to the value of complainant's buildings in South Dakota.

Every place where we have been able to apply any kind of a test, Mr. Bates' figures have been shown to be unreliable.

About the only way to get a fair figure on this item of buildings will be to make a comparison of the estimates made by Mr. Booth and Mr. Bates, so far as we can, and thus arrive at the per cent. of reduction and apply that per cent. to the whole item.

The following table shows the total estimates of Mr. Bates and Mr. Booth of all the property at the stations named:

	BATES.	BOOTH.
Sioux Falls	$38,555	$21,943.00
Mitchell	63,676	39,289.92
Egan	19,320	10,624.00
Woonsocket	14,675	8,761.00
Vilas	2,200	1,231.00
Harrisburg	1,635	837.23
Total	$140,061	$82,686.15

The reduction is $57,374.85 or 40 per cent.

It we apply this reduction to the whole of the item we have $940,606, less $376,242.40 (40 per cent.), leaving $564,363.60.

This is not satisfactory but is perhaps the best that can be done with the material at hand.

Returning again to Mr. Whittemore's estimate we find after the item, "Engineering, etc.," Mr. Whittemore drew a line and made his footing $14,246,505.

Then apparently as an after thought he adds $854,790 for interest, which, it will be noticed, is equal to one year's interest at 6 per cent. This is added upon the

assumption that the whole $14,246,505 of labor and material was non-productive for the full period of one year. It is an assumption not warranted by the facts, and does violence to the claim of good management.

The evidence clearly shows that railway companies do not buy track material such as rails, and store it away. There is too much money involved. It is purchased as needed and placed in the track. This entire 1101 miles of road was not idle until all was completed. A glance at this, (Exhibit 1, page 4), will show that this 1101 miles of road is not an entirety in the sense that no part of it was available for use until the entire system was completed. On the contrary it is apparent that any section or division of the road was available for traffic as soon as such section or division was completed. It is a fair assumption, nothing to the contrary appearing in the testimony, that the several lines were opened for traffic as soon as the rails were laid and that in any event the track material was not dormant to exceed thirty days.

Mr. Whittemore estimates track material as follows:

Rail	$4,970,627
Spikes	207,765
Splices	418,000
Ties	1,068,600
Switches	69,000
Crossings	2,000
Crossing plank	5,760
Cattle guards	10,000
	$6,751,752

Items which belong to or follow the track:

Track laying	$534,244
Ballast	133,500
Track material moved to the front.	154,140
Fence	141,400
Snow fence	67,200
Freight on track material	2,342,323
Total	$10,124,559

By this it will be seen that $10,124,559.00 of the $14,246,505.00 is money invested in the track, and to be very liberal we should not allow more than 60 days for getting this track in shape for trains over any given section or division of the road. To allow four months on the balance of the items would certainly be fair.

However, we do not want to figure this interest on the stimulated figures contained in Mr. Whittemore's estimate, but the interest should be figured on the fair cost of the road. On this basis we find that our estimate of the items constituting the $10,124,559.00 amounts to $4,372,419.08. Interest on this sum for 60 days at 6 per cent. amounts to $43,724.19; and that the balance of the items constituting Mr. Whittemore's $14,246,505.00 we estimate at $3,690,679.68, and interest on this sum for four months at the same rate amounts to $73,813.58, making the total interest item $117,537.77.

We now find that Mr. Whittemore draws another line and makes another footing, $15,125,877.00. Then comes another afterthought—for betterments, 5 per cent., $756,294.00.

Where has this betterment been placed?

Not on rails charged at $46.76 per ton that are only worth $12.85.

Not on ties charged at 30 cents that are only worth 21 cents, and 200 more to the mile than there are in the track.

Not on the ballast that has worn out and disappeared.

Not on the 1,000 cattle guards, when there are only 221 in the state.

Not on the $2,532,035 freight and transportation.

Not on the $940,606 of buildings that are figured at least 40 per cent. more than they cost.

And certainly not on the interest item of $854,790.

Our only answer is that this betterment exists only in the imagination of the witness.

Mr. Whittemore concludes his estimate with the modest item of $300 per mile for material on hand. By reference to page 34 of the annual report for 1897 we find that complainant had material on hand:

June 30, 1896	$1,846,511 36
June 30, 1897	1,911,287 76

This, of course, was for the entire system of 7,866.88 miles of road, and amounts to $244 per mile of road.

Why South Dakota lines, with few trains and light traffic, should be more than the average on the entire system is not explained.

From the best analysis of the testimony that we are able to make, we believe the following to be a fair state-

ment of the value of the items we have been considering:

Earth work	$1,886,207 00
Riprap	7,500 00
Bridge timbers in bridges	330,330 00
Piles in bridges	163,660 00
Truss bridges	35,495 00
Iron culverts	14,300 00
Relayer steel rails	1,333,441 36
Track spikes	207,765 00
Rail splices	418,000 00
Cross-ties	701,945 32
Switches	69,000 00
Railroad crossings	2,000 00
Track laying and surfacing	284,930 40
Right of way fence	30,940 00
Snow fence	67,200 00
Highway crossings	1,560 00
Cattle guards	2,210 00
Freight	1,099,487 00
Sign boards, etc.	11,626 00
Buildings, etc	564,363 60
Right of way	140,928 00
Telegraph	71,282 00
Engineering, etc	330,300 00
Material and supplies in store	289,628 00
	$8,063,098 60
Interest	117,537 77
	$8,180,636 37

Average cost per mile, main line, $7,430.

As a general proposition, can these figures be sustained?

We find from the annual report for 1894 (page 712), that the complainant constructed 4.24 miles of road from its then termini to the city of Sisseton, South Dakota, at a cost of $20,154.94, being an average cost of $4,753.52 per mile. Mr. Whittemore attempts to explain away these figures by the statement that the grading was done by the people along the route.

Admit that to be true and add to the figures given the average cost of grading as estimated by Mr. Whittemore, $1,589 per mile, and it only makes $6,342.50 per mile.

The total cost of constructing the Pattersonville Extension as shown by the account produced by complainant was $2,939,701.16 (page 760), and consisted of 247 miles of road. This is an average of $11,900 per mile. In this account rails were charged at various prices, but taking Mr. Whittemore's average $46.76 per ton and reducing it to $12.85, we have 247 miles, 88 tons to the mile, 23,736 tons; a reduction of $33.90 per ton amounts to $804,650.40. The freight amounted to $398,492.54 on the basis of one cent per ton per mile; reduce this to six-tenths, the basis used in our estimate, and the reduction amounts to $159,397. Deduct these two items from the whole cost, $2,939,701.16, and thus reduce the estimate to the basis of our estimate on rails and freight, and it leaves the cost at $1,975,653.76, or $7,998.59 per mile.

Another example is found in the annual report for 1895, (page 713), where it is reported that complainant constructed an extension from Minocqua, Wisconsin, to Star Lake, Wisconsin, a distance of 18.8 miles, at a cost of $183,623.73 (page 713). This makes $9,767 per mile. It is in evidence that this extension was built through a timber country where the right of way had to be cleared of timber. Also that the country was rough and hilly, requiring much more grading and bridges than the Dakota lines (pages 813–814).

Mr. Whittemore testifies to the building of second main track in Illinois and that it costs very much more per mile than the construction of the Dakota lines did per mile (page 430).

Q.—Are you able to state at this time the cost of that second track per mile?

A.—It will aggregate about $700,000. That is to say, for thirty-five miles. That which we have under way now will cost about $20,000 per mile. It is not a parallel to anything you have in South Dakota.

Q.—It is better constructed?

A.—No, sir; it is through a different country.

Q.—And the grading is different?

A.—Yes, sir.

Q.—And of course the ballast is altogether different?

A.—The ballast would be of a different character. It is not completed yet, but that is my estimate of the cost of the whole.

Q.—And of course you use a much heavier rail?

A.—Yes, sir; it is a heavier rail.

Q.—And the construction of this second track that you speak of would be more expensive than the construction of the road in South Dakota?

A.—Yes, sir.

We find from the annual reports that the complainant began building second track in 1890, (page 708), and we trace the record of such building through the annual reports and find (pages 708, 709, 710, 712, 715), that 242.91 miles of second main track were constructed at a cost of $1,781,979.41, making an average of $7,335 a mile.

It is true that second track does not require expenditures for right of way, depot, engine and shop buildings, but these items all told do not amount to $1,000 a mile in Dakota and would be more than offset by the heavier rail and more expensive ballast used on the new second tracks.

From these examples it will be seen that we are fully justified in our contention that the Dakota lines did not cost to exceed $7,430 a mile.

So far we have considered the value as measured by the cost of construction.

No testimony has been offered to show the amount of stock and bonds issued on account of the construction of the Dakota lines. The complainant has offered

evidence by which it appears that the Dakota lines were bonded for $19,365,247.16, but it does not appear that the proceeds of these bonds were used in the construction of the lines. It simply built the road, then mortgaged it, and one of the best proofs of the fact is the testimony of the auditor (pages 612-613), that the books o e company do not show any surplus funds being the difference between the cost of the road and the proceeds of the bonds. So that the amount for which the road was mortgaged has no relation to its cost and is no evidence of the cost or present value.

The evidence that the road is more valuable to-day than when constructed, consists solely in mere opinion, and is not based upon any fact, so that it is not to be taken seriously, and we shall spend no time in discussing it; yet it presents one of the many ludicrous contradictions of complainant in this case. It claims the property cost $15,000,000 and has been in operation from 15 to 18 years; that it has always operated the lines at a loss and yet the property is worth more to-day than when first constructed.

By the laws of the state of South Dakota, the complainant is required to file with the state auditor a sworn statement of all their property in the state subject to taxation. This statement is presented to state board of equalization and is the basis for the assessment of complainant's property. Exhibit 54 (page 747) is the statement filed by complainant with the state auditor for the

year 1897. While we are willing to concede a reasonable difference between an estimate of actual value and a valuation made for purpose of taxation, yet we cannot concede that any such difference as appears here can be overlooked or justified. The complainant claims its buildings, water and coal stations, etc., are worth $940,606 for the purposes of this case. In its sworn statement, filed with the auditor, it claims the same items to be worth only the sum of $135,864. In the tax statement the complainant declines to fix a valuation on its railway in South Dakota, saying: "The officers of this company will not assume the responsibility of stating under oath, the value of the property, inasmuch as it depends upon conditions and circumstances which are not fixed and capable of demonstration."

In the case at bar the officers of the company did not hesitate to assume the responsibility of stating under oath the value of its property of every kind and description, but it is not certain that the conditions and circumstances are such that the high valuation testified to by them are fixed and capable of demonstration.

This statement was filed with the state auditor in June, 1897, and in July following they instituted this action.

Standing in the door of a court of equity, they said to the state, we know not the value of our property, and then turning to the court in the next breath swear

positively to these enormous valuations as the basis for the relief sought in this action.

Complainant has offered no explanation whatever of the apparent contradiction between its own records and Mr. Whittemore's estimate. In fact, so far as this issue is concerned, it has rested its case entirely upon the testimony of Mr. Whittemore and Mr. Bates.

It was no duty of the defendant to show the value of this property, but it was the duty of complainant speaking through its witnesses, Mr. Whittemore and Mr. Bates, to a court of equity, to establish the value of its property to the satisfaction of the court. If complainant has failed so to do, then we are entitled to a dismissal of the bill.

Rolling Stock.

Complainant called Mr. Collins, the general superintendent, to prove the quantity of rolling stock on the South Dakota lines. It is a fact that very little of the rolling stock can be said to be located on any particular line or lines, as it moves about over the entire system of road as the traffic requires, so that at best we can only approximate the quantity of rolling stock on the lines in South Dakota. His testimony as to the quantity is as follows, (Pages 434 and 435):

Q.—How many locomotives are required and used for the South Dakota lines of the system?

A.—65.

Q.—How many freight cars are required and used in the conduct of the freight business of the South Dakota lines in South Dakota?

A.—3,500.

Q.—Now, you may state how those freight cars are divided or classified?

A.—Box cars, 3,100; stock cars, 200; flat cars, 175; refrigerator cars, 25.

Q.—How many passenger cars of all classes are there on the South Dakota lines?

A.—68.

Q.—Is not a certain proportion or number of the locomotives or cars of all kinds constantly in the shops for repairs?

A.—Yes, sir; and I have estimated the shop margin of locomotives and cars in my figures, or rather I have allowed for that.

Q.—How many mail and express cars in South Dakota on the South Dakota lines?

A.—13.

Q.—How many baggage, mail and express cars?

A.—1.

Q.—Passenger, mail and baggage?

A.—3.

Q.—How many passenger and baggage cars?

A.—6.

Q.—How many mail cars?

A.—3.

Q.—How many baggage cars?

A.—3.

Q.—How many coaches?

A.—38.

Q.—How many sleepers?

A.—1.

Q.—How many cabooses?

A.—40; these include the repair and shop margin based on what our records show to be the number required.

Q.—Have you any snow plows on the South Dakota lines; rotary snow plows?

A.—Yes, sir, we have one rotary plow.

Q.—What other cars have you there?

A.—Wrecker cars, tool cars and flanger cars; 15 altogether.

Q.—Have you any other equipment than that you have named on the South Dakota lines?

A.—We have a weed burner car, two pile drivers with two pile driver tenders.

Q.—Are you prepared to give the cost of this equipment about which you have specified?

A.—No, sir; I cannot.

Q.—Are your figures of the equipment based upon the present business in South Dakota?

A.—Upon the business we have been handling in South Dakota, say, during the past year.

Q.—Well, is the present equipment as great as you have had to use at some other stages of the business operation of the South Dakota lines?

A.—No, I think not. We formerly ran more passenger trains in South Dakota than we are now running. Business was much better and it required more service, and as the business fell off some reductions were made in the train service. We released some of the passenger train equipment.

Mr. Collins says that there are 65 locomotives, but he gives no description of them and is unable to do so. He testifies on cross-examination as follows, (page 435):

CROSS-EXAMINATION BY MR. NULL

Q.—Can you give a description of the sixty-five locomotives?

A.—No, sir; not from memory, and I may say that of course these same sixty-five locomotives do not remain within the geographical lines of South Dakota all the time.

And on page 439:

Q.—Are you able to tell the names of the manufacturers of these engines; that is, what engines they are?

A.—No, sir.

Q.—Whether Grant engines or what they may be?

A.—No; I cannot tell that without consulting the record; I think the record is incomplete.

He says there are 3,500 freight cars assigned to South Dakota. The method of arriving at this number is apparent from his testimony on cross-examination on pages 444-445:

Q.—Is it not a fact that the freight cars run over the entire system?

A.—Yes, sir.

Q.—There is no one freight car assigned to South Dakota, no particular car?

A.—That is, in freight service?

Q.—Yes?

A.—No, sir.

Q.—So the only way you can get at the number of freight cars is by some sort of computation of about what is necessary to handle the business?

A.—Yes, sir.

Q.—You have a car accountant?

A.—Yes, sir.

Q.—To whom the station agents report daily the cars and where they are?

A.—Yes, sir.

Q.—So that it would be possible to know the number of cars upon the track in South Dakota any day in the year?

A.—Yes, sir; but that would not indicate the number required.

Q.—No, but that would indicate the actual number there?

A.—That would indicate the number that were standing on tracks, but it wouldn't indicate the number

wanted. You must bear in mind, also, the number moving in trains in both directions; that could be arrived at, however.

Q.—Your car accountant is able to state, is not he, from reports made to him, the total number of cars within the boundaries of South Dakota, either standing on side-tracks or moving in trains?

A.—At a given time?

Q.—Yes?

A.—Yes, sir.

Q.—I wanted to know whether those 3,500 cars is arrived at by any averaging of the figures given by the car accountant.

A.—No, sir.

Q.—It had no relation to that?

A.—I took it for a period, at a time when the shipments were heaviest and at a time when we were unable to meet the calls for cars in South Dakota, took the average daily loading and the time, a less time than it really takes to make the round trip with the cars as they ordinarily go from point of shipment to destination and return, and used that as a basis to make those figures. I considered that was very conservative and I know personally, that number of cars did not anywhere near fill the requirements last fall.

Q.—So, then, the 3,500 would represent the number of cars engaged in handling the South Dakota traffic?

A.—That is the way I estimated it; yes, sir.

Q.—And not necessarily the number of cars actually within the borders of the state?

A.—There would not be that number of cars within the borders of the state at any one particular time, but they would come in and go out within a certain number of days in order to handle the traffic.

It will be noticed that Mr. Collins has selected a time when the maximum number of cars would be required and then he has taken the number required to handle the traffic to destination.

Since Mr. Collins has made a guess as to the number of freight cars in South Dakota, we will be justified in doing a little guessing.

By reference to the annual report for 1897, page 31, we find that the freight car mileage for 1897 was 287,037,043 miles, (including both loaded and empty). That is to say the movement of freight cars on the complainant's system of railway was equal to one car 287,037,043 miles. Mr. Collins says (page 434), that the total number of freight cars on the system was 28,214. This would indicate an average travel for each car of 10,138 miles.

The freight car mileage for South Dakota for 1897 was 10,985,606 miles (page 746). This, divided by the average car travel would indicate the use of 1,083 cars.

We now call attention once more to the tax statement (Exhibit 54, page 754), and we find the rolling stock on complainant's lines in South Dakota is listed as "Schedule C," which is as follows:

SCHEDULE C.

Showing the amount of "Rolling Stock" owned by said Railroad Company in use on each of the lines or branches owned, operated or leased in South Dakota by said Railroad Company.

NAME OF LINE.	Locomotives.		Passenger Cars.		Baggage, and Express Cars.		Parlor, Sleeping and Dining Cars.		Box, Freight and Stock Cars		Platform and Coal Cars.		Other Cars and Miscellaneous Rolling Stock & Portable Machinery.		TOTAL VALUE
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	
Iowa & Dak. Div., Main Line....	10	$35,000	3	$3,000	4	$2,000			100	$15,000	12	$1,440	35	$2,350	$60,790
Iowa & Dakota Division Running Water Brch.....	1	2,500	1	1,000	1	500			12	1,800	2	240	16	160	6,200
Iowa & Dak. Div., Eden Bch....	Only 39-100 of a mile in South Dakota—impracticable to apportion Rolling Stock to it.														
So. Minn. Div., Main Line.....	1	3,000	1	1,000	1	400			90	13,500	5	600	26	1,560	20,060
So. Minn. Div., Madison Bch....	1	3,000	1	1,000	1	400			15	2,250	2	240	20	200	7,090
H. & D. Div., Main Line.....	5	15,000	2	2,000	3	1,200	1	2,500	75	11,250	10	1,200	24	240	33,390
H. & D. Div., Whetstone Bch ...	1	2,500	1	1,000	1	400			7	1,000	2	240	8	80	5,220
H. & D. Div., Harlem Bch.....	1	2,500	1	1,000	1	400			12	1,800	3	360	8	80	6,140
H. & D. Div., Fargo Bch.....	Only 1 28-100 miles in South Dakota—impracticable to apportion Rolling Stock to it.														
Jas. Riv. Div., Main Line ..	3	9,000	2	2,000	2	800			40	6,000	3	300	28	280	18,380
Jas. Riv. Div.,Edgley Bch.....	1	3,000	1	1,000	1	400			10	1,500	1	100	6	60	6,060
Jas. Riv. Div., Bowdle Bch.....	1	3,000	1	1,000	1	400			10	1,500	1	100	16	160	6,160
Jas. Riv. Div., Eureka Bch.....	1	3,000	1	1,000	1	400			10	1,500	1	100	6	60	6,060
Jas. Riv. Div., Orient Bch.....	Included in Bowdle Branch.														
S. C. & D. Div., Main Line..	6	18,000	5	5,000	3	1,500			45	6,750	2	240	32	320	31,810
S. C. & D. Div., Armour Bch..	1	2,500	1	500	1	500			10	1,500			4	40	5,540
S. C. & D. Div , Sioux Falls Brch	4	10,000	3	1,000	2	1,000			28	4,200	2	240	18	180	18,620
Total.....	Total....														$231,520

The statement here made is that there was in South Dakota on complainant's lines:

37 locomotives valued at	$112,100
24 passenger cars valued	21,500
23 baggage, mail and express cars valued	10,300
1 sleeping car valued at	2,500
464 freight and stock cars valued at	69,550
46 flat and coal cars	5,300
247 other cars, etc	5,770
	$227,020

We might condone the offense of complainant placing different valuations on its property for the purposes of taxation on the one hand and for the purposes of this case on the other, but complainant can hardly be permitted to say that for taxation they have only 37 locomotives, 464 freight cars, etc., and then for the purposes of this case say that they have 65 locomotives and 3,500 freight cars. One or the other, or both of these statements have been made in bad faith.

There is no evidence in this case as to the value of this equipment. The only attempt in that direction was made by calling the auditor, Mr. Winnie, and having him produce Exhibit 28 (page 563). The exhibit is as follows:

EXHIBIT 28.

Statement of Equipment Assigned to Lines in the State of South Dakota.

	No.	Cost per Car.	Total Cost.	Remarks.
Locomotives	65	$10,300.00	$ 669,500.00	Includes shop margin of 5
Box cars	3100	553.00	1,714,300.00	
Stock cars	200	548.00	109,600.00	Includes repair car margin.
Flat cars	175	440.00	77,000.00	
Refrigerator cars	25	787.00	19,675.00	
Coaches	38	4,862.00	184,756.00	Extra—10.
Sleeping cars	1	12,000.00	12,000.00	
Mail and express cars	13			
Baggage, mail & express	1			
Passenger, mail & baggage	3			Includes special for extra service & shop margin, all classes—14.
Passenger & Baggage	6			
3 mail	3			
3 baggage	3			Extra—4.
Cabooses	29	2,703.00	78,387.00	
Rotary snow-plow	40	800.00	32,000.00	Includes shop margin of 14
Tool, flanger, wr'king crs, etc	1		15,000.00	
Weed burner	15	600.00	9,000.00	
Pile drivers	1		1,000.00	
Pile driver tenders	2	5,000.00	10,000.00	
	2	450.00	900.00	
			$2,933,118.00	
Miles of road in South Dakota			1,101.06	
Cost of equipment			$2,663.90	

February 1st, 1898.

On cross-examination concerning this exhibit, Mr. Winnie testified as follows, (page 570 to 575) :

Q.—Mr. Winnie, have you any record in your office which shows the number of locomotives assigned to South Dakota?

A.—Yes, sir.

Q.—And the number is sixty-five?

A.—Yes, sir.

Q.—Do the records of your office show the names or numbers by which each locomotive is designated?

A.—Of the entire number of locomotives, yes. I know the numbers of all the engines on the road.

Q.—You have that in your office, have you?

A.—Yes, sir.

Q.—So you could give us the name or number by which each of these sixty-five locomotives is designated?

A.—No, sir.

Q.—You could not do that?

A.—No.

Q.—Have you any other description of these sixty-five locomotives by which they could be identified?

A.—No, sir.

Q.—You simply have the number of them?

A.—Of the entire locomotive equipment, so many are assigned to Dakota.

Q.—From what officer do you get this information, that is, who reports to your office the equipment assigned to South Dakota?

A.—The general superintendent.

Q.—That is Mr. Collins?

A.—Mr. Collins.

Q.—This would apply to all the equipment assigned to South Dakota as well as to locomotives?

A.—Yes, sir.

Q.—Is it not a part of the duties of your department to purchase equipment?

A.—No, sir.

Q.—Are you personally familiar with the value of equipment?

A.—I know what sums are paid for equipment so far as the receipted bills would be evidence of that fact.

Q.—Your information, then, of the value of equipment is confined to the information that comes to your office of purchases made?

A.—The receipted bills for the purchases of equipment which are on file in the office; yes, sir.

Q.—But you did not make any of the purchases yourself?

A.—No, sir.

Q.—Are you sufficiently familiar with the value of equipment so that you could fix the value of any given piece of equipment by an inspection of it?

A.—No, sir; only in the most general way, of course. I am not an expert on machinery.

Q.—The figures which you have given in "Exhibit 28" of $10,300 as the cost of each locomotive—explain how you arrived at that figure?

A.—That was the average price paid for locomotives for a series of years during which the Dakota lines were under construction. The same is true in regard to all other classes of equipment, prices of cars, etc.

Q.—Do you mean that the figures which you have given as the value of equipment in "Exhibit 28" is the average price paid during the years of construction in South Dakota?

A.—Yes, sir; from 1879 to 1886 and 1887.

Q.—From 1879 to 1887?

A.—1886 or 1887, I am not sure which.

Q.—And these figures have no reference to present values?

A.—No reference to present values.

Q.—And represent, of course, the cost, new?

A.—The cost new; yes, sir.

Q.—There is no definite assignment of box-cars to South Dakota, is there?

A.—No, sir. Do you mean by description or the numbers of the cars?

Q.—Yes.

A.—No, sir.

Q.—The cars for the conveyance of freight of all kinds simply pass from one part of the system to the other, as commerce requires?

A.—Yes, sir.

Q.—And there may be more or less cars in South Dakota at any given time?

A.—Yes, sir.

Q.—Where did you get the estimate of the number of cars that would be required for the traffic in South Dakota?

A.—It was reported to me by the general superintendent.

Q.—Mr. Winnie, is it your undertanding that the sixty-five locomotives now in South Dakota were purchased between 1879 and 1886?

Q.—Well, that I cannot tell. I do not know what

particular locomotives are now in the state of South Dakota, or when they were built.

Q.—Is not it a fact, Mr. Winnie, that is, if you are informed in that respect, that the locomotives are changed about from different divisions of the system?

A.—I understand that to be so; yes, sir.

Q.—And that the locomotives do not necessarily remain in South Dakota from the time they are purchased until they are worn out?

A.—That is my understanding; yes, sir.

Q.—So that in the ordinary course of events it would not be likely that the sixty-five locomotives now in South Dakota are the identical ones that were originally placed there?

A.—It would hardly be likely.

Q.—Were there considerable purchases during the construction period in South Dakota?

A.—Yes; there were very considerable purchases made necessary by the construction of those lines.

Q.—And when were the heaviest purchases made—about what years?

A.—Well, I could not tell you without reference to the books. I did not figure on any one year. I took a series of years.

Q.—Mr. Winnie, could you procure for us a record of the purchases of equipment during the years 1883 to 1887, inclusive?

A.—Yes, sir.

Q.—Have you a record where you could send and get it now, or would it take time to prepare it?

A.—No, sir; it would take time to prepare it.

Q.—Do you know, Mr. Winnie, the description of these locomotives in South Dakota as to whether they are eight-wheel engines or ten-wheel engines?

A.—No, sir.

Q.—It is a fact, is it not, Mr. Winnie, that the company is now constructing locomotives, and has been constructing locomotives in its own shops for some years?

A.—Well, to a certain extent. Principally switch engines, and a few of what they call class "B" engines. A very small proportion of the engines added have been engines built. They have been principally purchased.

Q.—It is a fact, is it not, that the engines that have been purchased within the last two or three years have been purchased at a price considerably less than $10,300 each?

A.—I think not, sir. I think we have been paying over $11,000 lately for locomotives; $11,246, I think.

Q.—What class or style of locomotives is that that you have been paying that for?

A.—I am not positive; I think they are ten-wheelers, though.

Q.—They are the large, improved modern engine?

A.—They are modern undoubtedly.

Q.—The engines that have been constructed in the shop have been constructed at an expense of something over $7,000, less than $8,000 possibly?

A.—I think we built some switch engines at a cost of $6,500 or $7,000, and some of these class "B" engines up to $8,000 or $9,000.

Q.—What do you mean by class "B" engines?

A.—I can't explain that to you. That is the designation given to them in reports as a certain class or type of engine intended for certain work.

Q.—Box cars at $553 each. Mr. Winne, has the company paid as much as that for box cars at any time within the last ten years?

A.—I cannot tell whether it was within the last ten years or not. I know between the years 1879 to 1883, inclusive, we paid as high as $650 for box cars.

Q.—Has the company paid as much as $553 for box cars at any time since 1884?

A.—I could not tell you without looking up the records, Mr. Null, but I think they have.

Q.—I see a memorandum opposite the item of locomotives which reads: "Including shop margin of five." What does that mean?

A.—That was reported to me in that manner by the general superintendent. He can explain that better, perhaps, than I can, but I presume it means allowing

for the number which naturally would be under repairs at any time or at all times.

How can the value of this rolling stock be determined by such testimony?

He says the company purchased certain equipments during certain years at certain prices, but no one testifies that the equipment so purchased was ever placed on the South Dakota lines.

The only attempt to name a value for the equipment in South Dakota disclosed by the records of this case was when complainant listed its property for taxation. It there appears to be worth $231,520.

Complainant certainly cannot complain if we allow that the property was only listed at about one-third of its real value, and hence calculate the value of rolling stock at $694,560.

We can do no better as complainant has not given us the age, size, style or capacity of any of its equipment, and without some description we were unable to call competent persons on the question of value.

Again, we insist that it was the duty of complainant to fully and honestly show the value of its property, and its failure to do so cannot have the effect of imposing that duty upon the defendants.

We believe we have fairly interpreted the testimony in this branch of the case, and have successfully shown that complainant's property in South Dakota is not worth more than nine million dollars.

In order to cover the possibility that we have estimated too closely, we can add 12 per cent. to our total estimate, $8,875,196.37, and yet not exceed the value placed on the property by the circuit court.

In disposing of this branch of the case the circuit court stated the situation exactly when it said:

"What is the fair present value of the railroad property used by the complainant in the State of South Dakota, upon which it is entitled to earn what the services rendered are reasonably worth?"

No Direct Testimony.

There is no direct testimony in the record as to the present value of the complainant's railroad property in the State of South Dakota. There is testimony as to the original cost of rolling stock bought years ago; there is testimony as to the original cost of steel rails bought years ago and there is estimated cost of a good many articles of property, by the officers of the company, but in no case does any witness swear to the present actual value of any piece of property owned and operated in the State of South Dakota by the complainant company. The only way that the court can get at the reasonably fair value of the complainant's property used and operated as aforesaid, is by estimating, I might say guessing, just as the witnesses of the complainant have estimated and guessed as to its value. The court was inclined at one time to be of the opinion that it was un-

able, from the testimony, to ascertain what the fair present value of the complainant's property in South Dakota was, in view of the conflicting statements of witnesses called upon that question and the great disparity between the value of the property fixed by the company for the purpose of this suit and the value of the same property fixed for purposes of taxation. But the court has carefully examined the testimony introduced in regard to the value of the property in question, and after considering all the circumstances and incidents, under the rules of the supreme court which should govern the court in fixing the value, the court is unable to find that the present fair value of the complainant's property in the State of South Dakota used for railroad purposes, is to exceed ten millions of dollars. It is true that the record shows that the property is bonded and mortgaged for an amount largely in excess of this sum, but the amount of a mortgage upon property is no evidence of its value, and, therefore, is not worthy of consideration. Neither is the fact that a railroad company bought engines at a certain price ten or fifteen years ago binding evidence that the engines now are worth a dollar, in the absence of any testimony as to where they have been used, how they have been kept, and what their present condition is. The record fairly shows that it is not the new property of the complainant company that is used in South Dakota. This being fixed

by the court as the fair and reasonable value of the complainant's railroad property, what would be a reasonable sum for it to charge for the services which it renders to the public?

This closes our discussion of this branch of the case, and confident that the findings of the circuit court will be sustained, we shall in the further discussion of the case assume the value of complainant's property in South Dakota to be ten million dollars.

Cost of Maintenance of Operation.

Complainant in its bill of complaint (paragraph 10, page 25), alleges that its operating expenses, including taxes, (also including cost of maintenance), for six years, beginning July 1st, 1892, and ending June 30th, 1897, amounted to $7,410,947.55.

This would make an average annual expense of $1,233,491.25.

Exhibit 9, page 29, is a statement prepared by the auditor, Mr. Winne, and offered in evidence by complainant. By this exhibit it appears that the total operating expenses, including taxes, for the fiscal years 1894, 1895, 1896 and 1897 amounted to $4,562,502.92, or an average annual expense of $1,140,625.73.

These sums were arrived at by estimating the expenses for South Dakota lines on the train mileage basis.

That is done in this way: The total expenses of the company for the entire railway system for 1897 was $18,577,539.08. The total miles run by revenue earning trains was 2,199,466 miles. The total expense divided by the total train miles gives an average expense of 87.63 cents per train mile. The train mileage for South Dakota for 1897 was 1,272,542 miles (page 610). This multiplied by the average, 87.63 cents, indicates a total expense for South Dakota lines for the year 1897 of $1,115,128.55.

Mr. Winnie states it at $1,111,394.72 (page 29).

Defendants were not satisfied with this method of estimating the operating expenses for South Dakota, because the trains in South Dakota are not as heavy and the track is not maintained as perfectly as upon the other lines.

Complainant, evidently for the purpose of answering this challenge, attempted to prove the actual expense in South Dakota, and thereby show that the actual expense was greater than the sum indicated by the train mileage. For this purpose the general manager, Mr. Earling, prepared and put in evidence a statement of what would be the actual annual expense of maintaining and operating the South Dakota lines under existing conditions. This statement is known in the record as "Exhibit 22" (page 235), and is as follows:

EXHIBIT 22.

STATEMENT OF THE COST TO MAINTAIN AND OPERATE THE LINES OF THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY IN SOUTH DAKOTA.

1.	Repairs of track	$201,143 47
2.	Renewal of rails	157,930 97
3.	Renewal of ties	206,596 60
4.	Repairs of bridges	56,445 27
5.	Repairs of fences	11,307 60
6.	Repairs of buildings	50,630 30
7.	Repairs of locomotives	48,602 23
8.	Repairs of cars	59,370 17
9.	Repairs of tools and machinery	2,492 01
10.	Administration	51,918 41
11.	Station service	98,907 30
12.	Conductors, baggagemen and brakemen	95,345 49
13.	Engineers, firemen and wipers	100,575 95
14.	Train and station supplies	23,711 11
15.	Fuel consumed	229,839 45
16.	Oil and waste	6,996 88
17.	Personal injuries	1,343 34
18.	Damage to property	1,617 50
19.	Loss and damage to freight and baggage	3,630 34
20.	Taxes	98,482 68
21.	Insurance	8,460 94
22.	Mileage of cars	4,100 02
23.	Sleeping car expenses	862 49
	Total expenses	$1,520,309 92

On cross-examination Mr. Earling produced a statement, giving the details of each of the items contained in the foregoing exhibit and we offered it in evidence as a part of his cross-examination. (Exhibit 23, page 300).

The details of item No. 1 are as follows:

DETAILS OF ITEM NO. 1.—REPAIRS OF TRACK.

LABOR.		
7 roadmasters at $1,200 each per annum	$8,400 00	
125 track sections—$970 for labor per section, per annum for regular section force	121,250 00	
Usual extra gangs employed repairing and strengthening embankments; surfacing track, setting up and taking down snow fence, etc	46,395 00	
1 crossing watchman, per annum	420 00	$176,465 00
MAINTENANCE—Frogs and Switches.		
690 frogs, renewal 20 per cent., 138 per annum, at $18.00 each, delivered at Mitchell	2 484 00	
1,380 guard rails, renewal 10 per cent., 138 per annum, at $3.10 each	427 80	
690 sets switch ties and head blocks, renewal 12½ per cent., 86 sets per annum, at $46.43 each	3,992 98	
690 switch stands, rods, locks, chairs, blocking, etc., renewal 5 per cent., 35 sets per annum, at $20.00 each	700 00	
10 railroad crossings, renewal 20 per cent., 2 per annum, at $100.00 each	200 00	
Total	$7,805 78	
LESS SALVAGE.		
55,200 lbs. frogs.		
15,200 lbs. guard rails.		
7,000 lbs. switch stands, rods, etc.		
2,400 lbs. railroad crossings.		
79,800 lbs. at $4.50 per ton at Mitchell	179 55	7,626 23

MAINTENANCE of Crossings, Signs, &c.		
1,200 highway crossings—renewal of planking for 200 crossings per annum, 48,000 ft. at $13.00 per M. at Mitchell	624 00	
1,200 highway crossing signs—renewal of 10 per cent., 120 per annum at $5.00 each.	600 00	
40 railroad crossing "One Mile" signs, renewal 10 per cent., 4 per annum, at $6.00 each	24 00	
REPAIRS OF TRACK.		
Maintenance of crossings, signs, &c., 40 railroad crossing "Stop" signs; renewal 10 per cent., 4 per annum, at $6 00 each	24 00	
2,000 whistling posts (two for each crossing outside of cities); renewal 10 per cent., 200 annum, at $1 00 each	200 00	
256 station mile boards; renewal 10 per cent., 26 per annum, at $6.00 each	156 00	
510 mile posts; renewal 10 per cent., 51 per annum, at $1.00 each	51 00	
1,100 sets rail rest posts; renewal 10 per cent., 110 per annum, at $1.00 each	110 00	
10 sets timbers for railroad crossings; renewal 20 per cent., 2 per annum, at $23 20	46 40	
100 miles snow fence; renewal 12½ miles per annum, at $864.00 per mile	10,800 00	12 019 40
TRACK TOOLS.		
152 hand cars, at $35 00 each, $8 220.00; renewal, 8 per cent	657 60	
131 push cars at $19.00 each, $2,489 00; renewal, 8 per cent	199 12	
Valuation of tools for section gangs and extra gangs, $13,249.00. Replacements, 12½ per cent	1,656 12	2 512 84
TELEGRAPH DEPARTMENT.		
Labor furnished by railway company for repairs of telegraph lines, 3 repairers at $840.00 per annum		2,520 00
Total repairs of track		$201 143 47

The first item is composed largely of the wages of the road masters and section men and indicates the expenditures made to keep the track and road bed in order. It is an item easily checked as the data is taken largely from the pay rolls. The charge to South Dakota (Earling's estimate) is very light. It should be so because we know as a fact that no more is spent on Dakota lines in this direction than is absolutely necessary and there is no track walking or patrolling in Dakota as upon the heavier lines in the eastern states.

DETAILS OF ITEM NO. 2.

RENEWAL OF RAILS.		
Renewal of rails 6¼ per cent. per year for 1,101 miles; 68 81 miles, 60 lbs. per yard, 6,488 tons at $24.50 per ton.....	$158,956 00	
Angle bars, 722 tons at $31.50 per ton...	22,743 00	
Track bolts, 75 1-10 tons, at $44.50 per ton	3,367 65	
145,200 nut locks at $6.50 per M..	943 80	
7,630 lbs. washers.....	175 00	
344 kegs new spikes, at $4.00.....	1,376 00	
	$187,561 45	
LESS SALVAGE.		
5 633 tons rails.		
145 3-10 tons splice bars.		
41 7-10 tons bolts.		
34 2-10 tons spikes.		
5,854 2-10 tons, at $8 00 per ton in Mitchell	46,833 60	$140,727 85
Cost of distributing and laying 68.81 miles of new rails, and of picking up and loading 68 81 miles of old material, at $250 per mile.....		17,203 12
Total renewal of rails.....		$157,930 97

This item brings us to the interesting subject of rail wear.

Mr. Earling testifies as follows, (page 226):

A—In the item of renewals of rails are included the rails which are necessary for replacement each year, together with the joint fastenings which consist of the angle bars, track bolts, nuts, washers, and whatever else enters into the replacement of rails. *The rails on the South Dakota lines require replacement on an average, at least once in sixteen years.* That is a very conservative statement, and *the process of this replacement is going on all the time.*

Mr. Earling repeats this statement several times and insists that a 60-pound steel rail will not wear more than 16 years on the South Dakota lines.

Inasmuch as steel rails have only been in existence for about 30 years, the question as to how long they will wear may not be definitely determined, but the authorities on the subject agree that the rail is worn out by the wheels of the locomotive pulling the loads over it and that the life of the rail is to be measured by the number of trains passing over it, rather than by the number of years in the track.

On lines of railway where there are many trains each day rails have been worn out in so short a time that the length of time in the track and the elements were not a factor in the problem. Under these circumstances

rail wear has been definitely ascertained. But where there are so few trains that the rail remains in the track for a long period of time, so that the weather and other influences are to be considered in connection with the wheels of the locomotive, the life of a steel rail is as yet undetermined.

Prof. Whitney testifies on this subject as follows, (page 849):

"From my own personal observation of the brand and wear of rails on the Pennsylvania road and from my knowledge of the position of experts on this subject, the life would be from thirty to fifty years. That is, thirty to fifty years is conservative for an ordinary average railway, and the traffic being light here, it might go considerably further. It has to be a matter of opinion, as the steel rails have not been used fifty years."

The Economic Theory of the Location of Railways, by Arthur Mellen Wellington, is a standard authority used as a text book in our public schools and colleges and by railroad engineers generally. (Page 848.)

On the subject of rail wear this authority on page 119 says: (Page 847.)

A. "The average life of a good steel rail, properly manufactured and inspected, so as to eliminate all imperfections arising from the lack of ordinary care and skill, and weighing 60 to 80 lbs. per yard, according to

the weight of engines, has now been determined with considerable approach to certainty, to be about 150,000,000 to 200,000,000 tons, or (what is probably a more correct way of putting it,) from 300,000 to 500,000 trains. From 10 to 15 lbs. or three-eights to five-eighths of an inch in height, of the head of such a rail, is available for wear, and abrasion takes place at the rate of about 1 lb. per 10,000,000 tons, or one-sixteenth of an inch per 14,000,000 or 15,000,000 tons. This durability may be regarded as near a minimum for strictly first-class rails, and many recorded observations indicate a much higher durability."

Professor Whitney also gives an example as follows: (Page 849.)

Q. I will ask you if you now call to mind any particular observation which you have made of the performance of a steel rail?

A. Yes, sir; I remember distinctly on the west end of the Pennsylvania Company's lines—Pittsburg, Fort Wayne and Chicago—somewhere near the state line between Indiana and Illinois, a rail with a brand of 1874 or 1875, which I observed in 1890, still in the track—single track. All of the heavy traffic of that line passed over it, and it was still in fair condition, having been a sixty pound steel rail; it was worn considerably, and of course was soon renewed.

Q. What was the daily number of trains passing over that rail, at the time you made the observation?

A. I could not say definitely; the traffic over that line is pretty well known; I should say thirty trains per day each way would be a conservative estimate.

Q. That would make about sixty locomotives passing over that rail each day?

A. Yes, sir.

Mr. Harrahan, second vice-president of the Illinois Central Railway, on cross-examination, testifies on this subject as follows, (page 602):

Q.—In speaking about the life of a rail, is not the life of a rail measured more accurately by the number of tons carried over it than the years in the track?

A.—Yes, sir; when you have got an extensive tonnage. Then, of course, the tonnage would govern. When you have got a light tonnage, it won't amount to that extent it does when it is a heavy tonnage.

And again on page 605:

A.—I know what "relayers" are. We have relaid them ourselves, and we do that kind of thing right along. We take the rails up. For instance, in 1890 we had nothing but sixty-pound steel rails on the line of the Illinois Central road. It was too light for the traffic. We took it up and put down seventy-five pound rails, and then moved the sixty-pound rails onto the branches. I expected those rails would last ten, fifteen, eighteen or twenty-five years. It depends on the amount of traffic, and the particular branches on which it was laid.

Q.—So that those "relayers" under a light traffic, indicated by a showing of ninety-six tons to the train, and one train each way a day—

A.—Would last a long while. No telling how long it would last.

According to these authorities, the minimum life of a steel rail, measured by the number of trains passing over it, would be 300,000 trains. The train mileage for South Dakota for 1897 was 1,272,542 miles. This train mileage is equal to 1,156 trains passing over the 1,101 miles of track in South Dakota per annum. On the minimum basis of 300,000 trains, the rails would wear 259 years. According to Mr. Earling's estimate, the rails would wear out in sixteen years, with an average of 1,156 trains per annum or a total of 18,496 trains. On this basis the rail which Prof. Whitney observed in the tracks of the Pennsylvania railway carrying sixty trains a day would have been worn out in one year.

While the rails may not last 259 years on account of the weather and influences aside from actual rail wear, yet it must be apparent that Mr. Earling is far from the fact when he says they will wear out in sixteen years.

Mr. Earling's estimate amounts to an annual net expenditure of $157,930.97 for rail renewal. This will amount to an average of 12.4 cents per train mile. That is to say, according to Mr. Earling's estimate the trains on the South Dakota lines wear out 12.4 cents of

rail for every mile they move over the track. We find from Exhibit 56 (page 769) that the total rail renewal for complainant's entire railway system for a period of ten years, 1888 to 1897, inclusive, amounts to the sum of $5,408,273, or an average annual expenditure of $540,827 for the entire road, or an average of about $87.88 per mile of main line. According to this, it would only cost $96,755.88. This would not be a fair test, because the trains and traffic are lighter in South Dakota than upon the balance of the system, and hence the rail wear in South Dakota would be less. Mr. Earling admits this in his testmony, where he testifies as follows, (page 284):

Q. I will ask the question in this form. If in your judgment, based upon your experience, the actual cost for annual repairs to tracks in South Dakota would amount to one-sixth of the entire expense to the whole system for that item?

A. *No, sir; it would not amount to one-sixth, because the traffic is lighter in South Dakota and the wear and tear is not so great.* In the matter of ties, repairs to buildings and many other items, there would be no difference. It would be the same on the South Dakota lines as it is on any of the other lines, *but not as to rails. The expenses would be somewhat less in South Dakota than in some of the other states where the volume of traffic is larger.*

On page 31 of the annual report for 1897 we find that the train mileage (revenue trains) for 1895 was 19,380,-

472; 1896, 22,285,659; 1897, 21,199,466 miles, making a total for the three years of 62,865,597 miles. By reference to Exhibit 56 (page 769) we find that rail renewals cost for 1895, $454,113; 1896, $468,727; 1897, $681,274, a total for the three years of $1,604,114. Divide this total expenditure by the total train miles and we have an average of 2.55 cents per train mile. How can Mr. Earling justify his estimate which equals 12.4 cents per train mile for South Dakota and at the same time admit that the rail wear is not as great in South Dakota as upon other lines of the system?

According to the United States census of 1890, the total train mileage for that year in the United States was 741,000,000 miles, and rail renewals cost that year $9,198,081. This is an average of 1.24 cents per train mile.

On page 75 of the 11th annual report of the interstate commerce commission we find that the total rail renewal for the United States for the year 1896 was $10,419,393, and 1895 was $10,124,633, and on page 59 of the same report we find the train mileage stated as follows:

	1896.	1895.
Passenger train mileage....	332,854,218	317,565,615
Freight train mileage.....	479,500,170	449,291,238
Total.....	812,354,388	766,856,853

These figures indicate an expenditure of 1.28 cents

per train mile in 1896, and 1.3 cents per train mile in 1895.

Again we quote from Wellington. On page 121 he says: "The reasonable cost per train mile of rail wear may, on the basis of the facts above given as to the life of rails, be estimated at from .3 to .5 cents, as follows:

"Cost of one mile of steel rails, 95 long tons, at $30	$2,850
Less scrap value of unworn steel, say nearly half	1,350
Leaving as net cost of wearable portion, per mile	$1,500

"Divided by total life of 300,000 to 500,000 trains, this gives .3 to .5 cents per train mile; but in view of the present difficulty of getting good rails, and tendency to increase the weight of trains, we assume the even figure of *1 cent per train mile as a maximum, which there is no need of ever exceeding.*"

It will be remembered that by the testimony of Mr. Earling and Mr. Harrahan and others, that in the last few years large lines of sixty-pound steel have been taken up and replaced with heavier rails. We also know, as a fact, that many miles of iron rails have been taken up and replaced with steel. So that the statistics we have given would naturally show a larger expense for rail renewal than it would if there had been nothing done except to renew worn-out material, and hence we may fairly assume that Wellington's estimate is borne out by the statistics we have cited.

We again call attention to the fact that the complainant has a full and complete record of rail renewals in South Dakota and could have shown the court exactly what sums have been annually expended for that purpose. True, Mr. Earling testifies that "It would be necessary to write to each section foreman in order to get that information" (page 617), and this is complainant's excuse for not proving the actual expenditure. However, we find by the testimony of complainant's road master, Mr. Nelson, that full reports are made of all labor and materials used in repairs of the track, and we have the blank used for the purpose of making such report (Exhibit 69, page 805). There can be no question whatever but what the roadmaster's department could have given the exact facts concerning these expenditures, as we find that the auditor, Mr. Winnie, testifies on page 22:

Q.—Mr. Winnie, you stated yesterday the method in which the earnings are ascertained. State the method by which you ascertained the expenses, operating expenses of the system?

A.—From the beginning of the operation, the first thing, the first principal item is the labor. Pay rolls are made up by the different superintendents for the train service and the men employed on the road on maintenance of the way. They are made up by the storekeeper or his assistant for the engine men and round house men. The pay rolls for the clerks are made up

in this building. The material is purchased in general by the purchasing agent. He buys everything except the coal, rails and ties. His purchases are charged by him to the different departments to which they are shipped; the general store or the superintendents as the case may be. Each month the superintendent makes a report in detail of the material used. Those are examined in the auditing department and then summarized there. Each department is given its proper credit for material used, and the account for which it is used is charged. If it is an operating expense it is charged to its proper expense account; if for new work, construction of locomotives or cars or new structures additional to the property, it is charged to cost of production. In addition to that there are other expenses; for rents, settlement of personal injury cases, losses and damages to freight, damage to property, stock killed, fire losses, insurance, and matters of this nature that go through no particular department. A voucher is made and the expense charged on the auditor's book to the proper account.

And again on page 40:

Q.—Then, during that construction, if, during a certain month, you purchased a supply of rails and ties, the purchase was charged directly to construction account, was it?

A.—It would not be charged from the bills purchased.

Q.—That is what I want to get at.

A.—No, when the rails were purchased they would be shipped; rails for the use of the entire system would be purchased or contracted for at one time. As fast as those rails arrived they would be shipped all over the line where they were needed and when they were shipped they would be charged to the responsible officer at that place, the division superintendent, or whoever it might be; they would be charged against him. Then when they were used he would make a report of how and where they were used, and he would be given credit, and the proper account charged, whether it was repairs, renewal or whatever account the material was used for.

Q.—So that when a given quantity of material was shipped to the superintendent of the South Dakota Division, it stood upon your books as charged to that superintendent until he reported to you the use which he had made of the material?

A.—Yes, sir.

Q.—And then it would be either charged to the construction account, or to renewal account?

A.—As it was used, yes sir.

Q.—Have you an account designated "Renewal Account?"

A.—We have an account designated "Renewal of Rails and Renewal of Ties and Expense account."

Few trains and light traffic is one of the leading features of complainant's contention in this case. This ought to mean a minimum rail wear and we ought to figure rail wear at less than the average. Mr. Earling's estimate amounts to 12.4 cents per train; just about ten times the average in the United States and five times the ten year average on complainant's railway system.

If we accept the average in the United States and entirely ignore the fact that complainant is using old rails in South Dakota, worth only $12.85 per ton, we find that at the rate of 1.24 cents per train mile for 1,272,542 miles, the rail renewal will only cost $15,779.52, or about one-tenth the sum estimated by Mr. Earling.

Renewal of Ties.

Details of item No. 3, (page 302):

Number of ties in track, 3,562,000; 10 per cent. required for renewal per annum, 356,200 at 58 cents each, $206,596.00.

We have three exceptions to this item:

1st. There are not to exceed 3,342,592 ties in the track.

2nd. Tie renewal in South Dakota will not amount to 10 per cent. per annum.

3rd. Fifty-eight cents per tie is an over valuation.

The first question, number of ties in the track, has been fully discussed.

On the second proposition, Mr. Earling testifies as follows, (page 226):

Q.—The next item is renewal of ties, $206,596. Explain that item?

A.—*The number of ties in the company's track in the State of South Dakota is 3,562,000. These ties have to be renewed at least once in ten years. They do not actually last that long,* but I have taken it to be once in ten years; therefore, one-tenth of them must be replaced each year, in order to keep the track safe. That is equivalent to 356,200 ties each year. And such renewal amounts to $206,596 per annum.

And again on page 258:

Q.—You say that the average life of a tie in South Dakota is ten years?

A.—Yes, sir.

Q.—What kind of ties have you used chiefly in your South Dakota line?

A.—We are now using chiefly cedar ties.

Q.—The amount which you have given as cost for renewal of ties on your South Dakota lines is actual, I believe?

A.—It is based upon the ties having to be renewed every ten years, or ten years being the life of a tie, but

it is less than the amount expended because the ties do not last quite ten years.

In this instance as in case of rails no records or other evidence of actual renewal was offered and we have nothing from complainant as to the life of a tie in Dakota except mere opinion.

We called Mr. Cronk, the book-keeper in Superintendent Oliver's office at Huron and proved the actual tie replacement on the C. & N.-W. lines in Dakota for a period of nine years, 1889 to 1898 inclusive. The testimony shows the C. & N.-W. operates 771 miles of main track and 68 miles of side track, a total of 839 miles. (Page 909.)

His testimony was as follows: (Pages 908-909.)

Q.—What are your duties as clerk of the superintendent?

A.—Keeping of the accounts, making a portion of the pay rolls.

Q.—Do you keep the account of the ties and rails used in replacement and repairs?

A.—Yes, sir.

Q.—And have you kept such account since 1884?

A.—Yes, sir.

Q.—I will ask you if you have under your control records by which you could tell us the number of ties used in the replacement in the lines of the Chicago & North-Western Railyay Company in the state of South

Dakota, beginning with the year 1889, and up to the present time?

A.—Yes, sir.

Q.—Can you give it prior to that time?

A.—No, sir.

Q.—Please state why.

A.—The records were destroyed prior to 1889 on account of accumulation.

Q.—I will ask you to state the number of ties used for replacement and repairs during the year 1889 on the Chicago & North-Western Railway in South Dakota.

Mr. Kittredge: Complainant objects to such testimony for the reason it is incompetent and immaterial.

A.—As I understand the question, it is in South Dakota?

Q.—Yes.

A.—The figures we have are for the whole of the Dakota division lines together.

Q.—How much road does that include outside of South Dakota?

A.—About sixty-one miles.

Q.—That would be the track running into North Dakota at Oakes?

A.—Yes; I include that in here, but it includes principally the line from Tracy to the Minnesota state line.

Q.—That is, it includes the line from Tracy to Elkton?

A.—Yes, sir.

Q.—Now, the figures you are about to give us cover all the Dakota lines and the lines to Oakes and the line from Elkton to Tracy?

A.—Yes, sir.

Q.—What would be the total number of miles of line, including those two?

A.—Seven hundred and seventy-one miles.

Q.—And how many miles of side-tracks?

A.—Sixty-eight.

Q.—Now you may state how many ties were used in repairs and replacement during the year 1889 in this Dakota division, and you may further state the number each calendar year from 1889 to the present time?

Mr. Kittredge: Complainant objects to such evidence for the reason it is incompetent and immaterial.

A.—In 1889 29,025
In 1890 32,850
In 1891 51,625
In 1892 61,275
In 1893 107,000
In 1894 97,500
In 1895 49,500
In 1896 91,600
In 1897 94,500

The foregoing is a record of the actual experience of the C. & N.-W. R'y in South Dakota for a period of

nine years. We find the total replacement amounts to 614,875 ties. This makes an average of 68,319 per annum for 839 miles, or 81.4 ties per mile per annum. At this rate for 1,187 miles the renewal would amount to 96,621 ties per annum on complainant's South Dakota lines.

We have heretofore discussed the value of ties and find they are worth 21 cents, and that the freight as figured by Mr. Earling, amounts to 20.9 cents, making ties worth in Dakota 41.9 cents each. On this basis the renewal of ties would only amount to (96,621 ties at 41.9 cents) $40,486.39, or $34.10 per mile of road. This is the result of actual experience for the last 9 years in South Dakota, and even though it may appear to be below the average, yet it is the actual and therefore more valuable than the expert speculations of complainant's witnesses.

By reference to Exhibit 56 (page 769) we find that the entire expense of tie renewal on complainant's system of railway consisting of 7,747.55 miles (including side tracks) for ten years, 1888 to 1897 inclusive, amounted to $8,382,498, or an average of $838,249.80 per annum. This indicates an average annual expenditure of $108.19 per mile, while according to Mr. Earling's estimate, tie renewals in South Dakota cost $174.05 per mile (1,187 miles.)

It must be remembered that South Dakota trains and traffic are not as heavy as upon complainant's main lines; that the roadway is not so well maintained and that heavy trains and heavy traffic cause the rails to cut into the ties (at least so complainant's witnesses have testified) and that in many cases ties are destroyed by this cutting process long before they are decayed.

Complainant's witnesses have fixed the average tonnage of the South Dakota trains at 96 tons per train. (Page 240.)

Complainant called Mr. Sanborn, the general superintendent of the Chicago & North-Western R'y, and on cross examination Mr. Sanborn testifies concerning this cutting process as follows: (Page 952.)

Q.—The freight traffic of 96 tons to the train would be very light, would it not?

A.—Yes, sir.

Q.—And would you say that the ordinary freight traffic of 96 tons to the train would have the effect of cutting out the ties, as you speak of?

A.—Not when the trains run as far apart as they do in South Dakota.

Q.—One train each way a day?

A.—One train each way a day, I think they would last for some time.

And again on page 254:

Q.—This process of cutting into the tie would be arrested quite a little with a sixty-pound rail as compared with a fifty pound rail?

A.—Yes, sir; it would be better than a fifty-four pound rail, but there is more depending on the traffic put on it in regard to its cutting in the tie. I have noticed that on the Iowa division they are continually taking out good cedar ties to-day that are not decayed and are sound but are not fit for those tracks simply on account of the traffic they have over those rails.

Q.—And it would also be affected by the question as to whether the ties were laid 2,600 or 3,000 to the mile, would it not—that is, the quantity of ties in the mile?

A.—Why, the more bearing you get for the rail, of course, that would affect it.

Q.—It makes quite a difference whether there are fifteen or eighteen ties to the rail—three extra ties to the rail would make some difference?

A.—It would make some difference, of course.

Q.—Passenger trains in that territory are not heavy enough to affect the the problem?

A.—Not unless the cars would; it is not the load.

All this goes to show that while the average upon complainant's lines is $108.19 per mile, the South Dakota lines are minimum factors in the problem and that the tie renewals for South Dakota are very much less than

the average; certainly not greater than the average as Mr. Earling's estimate would indicate.

With the testimony of complainant so completely at variance with actual experiences are we not justified in basing our estimate upon the actual experience of the C. & N.-W. R'y? As we have found, this would amount to $34.10 per mile, or $40,486.39 for the 1,187 miles of road.

If complainant suffers an injustice by this method of estimating this item, it has only itself to blame. It has in its possession the records and information by which it could have shown the court exactly what its experience in tie renewals in South Dakota has been for a period of 12 to 18 years, and we would not now be speculating on the subject.

Passing the item of repairs to bridges, we come to the item repairs of fences.

DETAILS OF ITEM NO. 5.

REPAIRS OF FENCES.

Fence for 505 miles of track, 1,010 miles of fence; renewal 6 2-3 per cent per annum, 68 miles, at $133.20, for material and labor per mile	9057 60	
1,000 cattle guards, renewal 12½ per cent. per annum; 125 at $18.00 each	2,250 00	$11,307 60

This is a small item, yet it is great. We have found heretofore that by actual count there are only 221 cattle guards in South Dakota. Yet Mr. Earling estimates an annual renewal of 125. If Mr. Earling is right in

his estimate of 12½ per cent., the actual renewal would be 26. And we find Mr. Whittemore has estimated this cost at $10 each, (page 423) making this item $260 instead of $2,250. We have also found that the fence is estimated according to the number of cattle guards, and that on this basis there is only 110 miles of right-of-way fenced, or about one-fifth the amount of Mr. Earling's estimate. This would give $1,811.54 for fence renewal. The item would thus be reduced from $11,307.60 to $2,071.54.

DETAILS OF ITEM NO. 6.

REPAIRS OF BUILDINGS.

5 per cent. per annum on valuation of $94,0606.00, being original cost.....	$47,030 30	
4 pump repairers—wages $900 each per annum.....	3,600 00	$50,630 00

We may not be in a position to question Mr. Earling's percentage, but we insist that it should only be applied to the actual value or cost of the buildings. This would be 5 per cent. on $564,363.60.

DETAILS OF ITEM NO. 7.

REPAIRS OF LOCOMOTIVES. $18,602 23

This amount is arrived at by taking the total cost of repairs of locomotives for the entire system and dividing it by the total mileage made by locomotives on the entire system, which gives the cost per mile. The total locomotive miles in South Dakota multiplied by the cost per mile gives the above amount for the year ending June 30th, 1897.

Mr. Earling explains how this is estimated, as follows (page 227):

Q.—Item No. 7, repairs to locomotives. Explain that?

A.—This amount is arrived at by taking the total cost of repairs to locomotives for the entire system and dividing it by the total mileage made by locomotives on the entire system, which gives the cost per mile. The total locomotive miles made in South Dakota, multiplied by the cost per mile on the entire system gives the amount for the year ending June 30, 1897.

From this testimony we find that this is purely an estimate, based upon the miles run by the locomotives. We insist that the light locomotives pulling light trains in South Dakota do not require the repair that the large locomotives pulling heavy trains on complainant's main lines do.

Complainant has in its possession records showing exactly the cost of repairs to locomotives, and this exact amount could have been shown.

We secured and offered in evidence Exhibit 72, page 889. This is a record of the performances of locomotives for the month of February, 1898, on the James River division in South Dakota.

DEFENDANT'S EXHIBIT 72.

MONTHLY STATEMENT.

Performance of Engines Chicago, Milwaukee & St. Paul Railway, James River Division, Showing Full Expenditure in Detail for the Month Ending February 27, 1898.

Engines	ENGINEERS	No. of Miles Run				Pints of				Pounds Waste	Cords of Wood	Fuel Oil	Tons of Coal	Cost of Repairs	Wages of Engineers, Firemen & Wipers	Value of Oil and Waste	Value of Fuel	Total Cost	Cost of repairs per mile—Cts	Cost of Wages per Mile—Cts	Cost of Oil per Mile—Cts.	Cost of Fuel per Mile—Cts	Total Cost per Mile	Average Miles		Engines
		Passenger Trains	Freight Trains	Switch Trains	Total No. Miles	Valve Oil	Signal Oil	Hdlight oil	Machine oil															Pint Oil	Tons Coal	
113	J. Richardson	276	2451	....	2727	23	....	24	36	17	4	19	119.3	$15.34	$190.60	$3.84	$192.27	$402.05	.56	6.99	.14	7.05	$14.74	32.86	22.86	113
138	B. F. Slater and others	....	....	1278	1278	12	4	56	16	6	7	19	32.4	14.36	103.75	2.18	51.13	174.42	1.12	8.12	.17	4.24	13.65	14.52	39.44	138
144	G. S. Perry and Noble	3380	....	....	3380	19	....	38	72	17	9	28	68.2	54.19	235.10	4.97	112.10	406.36	1.60	6.95	.15	3.32	12.05	26.20	49.56	144
150														101.85				101.85								150
274	H. Noble and Perry	3380	....	....	3380	16	4	24	64	17	12	29	68.2	25.03	235.10	4.45	113.01	377.59	.74	6.96	.13	3.34	11.17	31.30	49.56	274
381	F. C. Darling and Aggas	....	2967	....	2967	16	....	2	61	28	7	23	89.1	18.18	208.00	4.69	144.89	375.76	.61	7.01	.16	4.88	12.66	37.56	33.30	381
384	O. F. Ladd and West	297	532	....	829	16	....	....	32	2	....	3	28.0	12.39	58.60	2.23	44.83	118.05	....	....	....	....	....	....	....	384
390	W. Aggas	....	1290	....	1290	14	4	4	28	11	3	11	51.1	40.28	90.35	2.57	82.77	215.97	3.12	7.00	.20	6.42	16.74	25.80	25.24	390
423	O. F. Ladd and West	166	2261	....	2427	24	4	36	28	32	7	26	61.0	14.47	169.72	4.63	99.96	288.78	.59	6.99	.19	4.11	1 .88	26.38	39.79	423
522	A. Perry and Brownlee	....	....	474	474	12	6	12	48	15	....	9	19.8	201.55	43.58	3.55	32.37	281.05	....	....	....	....	....	....	....	522
564	J. E. West and Davis	2872	....	....	2872	36	4	24	84	24	....	22	118 2	30.03	199.80	6.70	191.44	428.06	1.05	6.96	.24	6.66	14.91	19.41	24.79	564
	Total	10371	9501	1752	21624	188	26	230	469	169	58	189	655.3	8527.67	$534.60	$39.90	$1067.77	$3169.94	2.44	7.10	.18	4.94	$14.66	23.68	33.00	

J. N. BARR,
Supt. Mo. Power.

THERON HIGBY,
General Storekeeper.

From this, the only actual record in evidence on the subject, we find that the locomotives ran 21,624 miles. That the repairs cost $527.67 or 2.44 cents per mile. At this rate the repairs in South Dakota on the basis of 1,272,542 miles run in 1897 would amount to $31,-050.02.

Why is it that complainant did not prove up this item by the record, showing the actual expenditure, instead of submitting Mr. Earling's estimates and conjectures?

Items 8 and 9 we have not the data with which to make any tests.

DETAILS OF ITEM NO. 10.

ADMINISTRATION, $51 918 41

Management and general offices, foreign agency and advertising, legal expenses, New York office expenses, proportion of total expenses for the year ending June 30th, 1897, on earning's basis.

This item contains the salaries of the general officers. We attempted to inquire into this item, but were met with a refusal to answer. The auditor, Mr. Winnie, was on the stand, and the cross-examination on this point was as follows:

Q.—Who presides at the meetings of the directors?

A.—The president, when he is there.

Q.—The president of the road?

A.—Yes, sir.

Q.—What is the salary of the president of the road?

Mr. Kittredge: Objected to as incompetent and immaterial.

A.—I don't know.

Q.—You are unable to state?

A.—I am unable to state.

Q.—And who is the general manager of the company at this time?

A.—The general manager of the company at this time is W. G. Collins.

Q.—Are you able to state the salary he is paid by the company?

A.—I am not.

Q.—The payment of these salaries is certified through your department?

A.—Not in detail.

Q.—Can you secure the information called for in the last two questions from the records of your office?

A.—No, sir.

Q.—Do you know in which department a record is kept of those salaries?

A.—I decline to answer.

Mr. Temple: Let the record show that the witness declines to answer the question under the advice of counsel for complainant.

(Witness excused).

This was certainly a legitimate inquiry, and were it not for a desire to arrive at the actual cost of operation

we would insist upon the rejection of this item, because of the refusal of complainant to submit the facts to the court.

We have no data by which to test the accuracy of items No. 11, 12, 13 and 14.

DETAILS OF ITEM NO. 15.

FUEL CONSUMED, $229,839 15

The value of fuel consumed by locomotives in South Dakota during the year ending June 30, 1897.

Mr. Earling testifies that the coal consumed in South Dakota for the year was 57,191 tons (page 617), and figures over $4.00 per ton. According to these figures it would require a ton of coal for every 22.25 miles run by the trains in South Dakota, or 85.34 pounds to the mile; and would cost, at $4.00 per ton, 17 cents per train mile. We find by "Exhibit 72," that the passenger locomotives, No. 144 and 274, on the James River division, for the month of February, 1898, ran 6,760 miles. That they consumed coal at the rate of a ton of coal for every 49.56 miles, and that it cost 3.32 cents for No. 144 and 3.34 cents for No. 274 per mile. That freight engine No. 381 ran 2,967 miles and consumed fuel at the rate of a ton of coal to every 33.30 miles, at a cost of 4.88 cents per mile.

The average stated in this exhibit is 33 miles to the ton of coal, and the average cost is stated at 4.94 cents per mile run. We find that the coal is figured at $1.60

per ton. That is, locomotive 384 is not charged with any wood, but is charged with 28 tons of coal at $44.83. This would make $1.60 a ton, with three cents over, which probably represents the value of the fuel oil.

It will be remembered that this is the record for a winter month, and therefore would be a maximum, rather than a minimum or even an average month. In cold weather the consumption of fuel by the locomotive increases at the rate of 1 per cent. for each two degrees Farenheit difference of external temperature. (Wellington, page 137). During this month the passenger trains are heated by steam from the locomotives. From all these facts it must be apparent that "Exhibit 72" shows the maximum consumption of fuel on one of the important South Dakota divisions of complainant's railway. On this basis the quantity of coal consumed would be 38,562 tons for the train mileage. Add 10 per cent. for switching and trains other than revenue trains and we have a total of 42,418 tons.

Prof. Whitney in his testimony gave an estimate of fuel consumed by complainant's locomotives in South Dakota, as follows (page 853):

Q.—Have you estimated the pounds of coal consumed by a locomotive in running one mile upon the average of freight and passenger service?

A.—Yes, sir.

Q.—I will ask you to state the number of pounds of

coal per mile, as you have estimated it, as being the average between the freight and passenger?

A.—I have taken forty pounds of fuel for the passenger and seventy pounds of fuel for the freight, and using the revenue train miles obtained from the annual report submitted, 1,277,500 miles in South Dakota, applying this average of the forty and seventy in the ratio of two-thirds freight trains and one-third passenger trains, which this report shows to be the proportion of train miles in South Dakota, I obtained 38,180 tons of coal. Adding to this 10 per cent. for switching mileage, which is large, I think, for this locality, or 3,818 tons, makes a total of 41,998 tons.

Q.—I show you blue print which purports to be a monthly statement of the performance of engines of the Chicago, Milwaukee & St. Paul Railway Company, James River division, showing fuel expenditure for the month ending February, 1898, and ask you to state from this statement the number of locomotive miles that is disclosed there?

A.—Passenger trains, 10,371; freight, 9,501.

Q.—And the switching trains?

A.—1,752 miles; total, 21,624.

Q.—Now what per cent. of the total is the switching miles?

A.—It is between 8 and 9 per cent.

The value of this coal as shown by "Exhibit 72" as fixed by the complainant is $1.60 per ton. We find that the complainant secures its coal for these trains of the Excelsior Coal Company in Iowa. This company is owned by complainant and its business is to furnish coal to complainant at cost. (Page 62-63).

We have proven by the testimony of Mr. Smith, a coal dealer in South Dakota, that Iowa coal is worth 85 cents a ton at the mines and that the freight on coal from the Iowa mines to Dakota is $2.00 a ton. (Pages 855 and 856).

This coal is hauled in on the regular trains of the company, and Mr. Earling has included in his estimate all the expense incident to the operation of the trains, hence to now allow a freight charge would amount to a duplication of the cost of bringing in the coal.

Then, again, for the purposes of this case, no freight should be allowed, unless it was also included in the earnings.

Mr. Bird, the complainant's traffic manager, testified on behalf of the complainant concerning this subject, as follows (page 367):

Q.—Mr. Bird, you say that the South Dakota lines are not charged anything for material or supplies

hauled by those lines. They could not be charged anything, could they, Mr. Bird?

A.—I do not see how they could be charged anything for that service, any more than I can see how we can divide the through rate from one point to another, on a part of the system, but the service has to be performed and the service costs money.

Q.—The South Dakota lines are a part of the lines of the Chicago, Milwaukee & St. Paul Railway Company?

A.—Yes, sir.

Q.—And when the St. Paul company wants supplies for its South Dakota lines, it asks for them?

A.—Yes, sir.

Q.—And if it charged anything, it would be charging itself and paying itself?

A.—Yes, sir.

Q.—Which would be an absurdity on the face of it, would it not?

A.—Yes, sir; a farce, certainly.

Take the fact as it now stands. This coal is worth 85 cents at the mines, and complainant in its own records figures it at $1.60 a ton in South Dakota. This would indicate an allowance of 75 cents a ton for freight, which probably covers the cost of delivery at the state line.

We figure 42,418 tons of coal at $1.60 a ton, making the total for this item $67,868.80.

With the exception of the tax item the remaining items are small and unimportant.

Mr. Earling's estimate amounts to $1,520,309.92, and is just equal to $1.195 per train mile.

On page 31 of the annual report for 1897 we find that the operating expenses on complainant's railway system for 1895 were 87.94 cents per train mile; 1896, 88.29 cents, and 1897, 87.63 cents per train mile.

How is it that Mr. Earling can make out a greater expense per train mile for South Dakota than the average upon the system?

The expense of maintaining the roadway is much less. The rail wear is less. The freight trains are composed of fewer cars, carrying less tonnage and pulled by lighter engines. The passenger trains are lighter, only one sleeping car in the state. Yet Mr. Earling's estimate is 31.5 cents per train mile higher for South Dakota than the average on the system.

The testimony on this issue is far from satisfactory. Wherever we have had the data to test Mr. Earling's estimates we have found them to be exhorbitant and unreliable. In every case where we have secured the records of complainant giving the actual expenditures,

we have found the expenditures to be very much less than Mr. Earling states it to be.

We cannot with any degree of certainty say what are the annual expenses of complainant in operating the South Dakota lines.

The Circuit Court finds, in its decree in this action: "That this Court is unable to find from the testimony what the actual cost of earning the local earnings for the fiscal years ending June 30th, 1894, 1895, 1896 and 1897 was." (Page 963).

This finding is challenged by appellant. We submit that it is impossible for the Court to determine, from the evidence, the annual cost of maintenance and operation with any degree of certainty.

We have before us three sets of figures, as follows:

Mr. Earling's estimate of $1,520,309.92.

Mr. Winnie's estimate of $1,111,394.72.

Defendant's estimate of $1,000,878.44.

Mr. Earling's estimate is certainly exhorbitant and unreliable.

Mr. Winnie's estimate is the result of multiplying the South Dakota train mileage by the average cost per train mile on complainant's system of railway, and thus charges South Dakota lines with a maintenance and traffic as expensive as the main lines, while the record discloses that South Dakota lines are not so well main-

tained and the trains and traffic are much lighter than the average on the system.

Defendants' estimate is not actual, but is the result of an analysis of Mr. Earling's testimony.

With the burden of proof resting on the complainant and every reasonable doubt being resolved in favor of the defendants, and considering that it was the duty of complainant to show the actual facts by satisfactory evidence and that such duty has not been performed in good faith, we feel justified in asking the Court, for the purposes of this case, to accept our estimate.

The following table shows the expense, as estimated by Mr. Earling, as estimated on train mileage basis, and as estimated by us on behalf of defendants.

The train mileage is estimated in this way: We find that the train mileage in South Dakota amounts to 1,272,542 miles and is equal to 6.0027 per cent. of 21,-199,446 miles, the total train mileage of the system.

We then take the items of expense on the system as stated on page 26 of the annual report for 1897, and applying this percentage we get the result shown by the table.

Under the the item, "Administration," we have included the several items mentioned by Mr. Earling under this head.

Our estimate on train mileage basis does not correspond exactly with the figures given by Mr. Winnie. His figures are $1,111,394.72, while our total is $1,092,075.55. This difference is due to the fact that Mr. Winnie included all the expenses of the system, while we for the sake of uniformity and comparison have only included the items named in Mr. Earling's estimate. The variance is less than $20,000 and, therefore, of no great importance.

THE SEVERAL ESTIMATES OF THE OPERATING EXPENSES, SOUTH DAKOTA.

	EARLING'S.	TRAIN MILEAGE.	DEFENDANTS'.
1. Repairs of track	$261,143 47	$107,346 04	$201,143 47
2. Renewal of rails	157,930 97	40,894 85	15,779 52
3. Renewal of ties	206,596 00	49,811 65	40,486 39
4. Repairs of bridges	56,445 27	40,897 43	56,445 27
5. Repairs of fences	11,307 60	2,921 62	2,071 54
6. Repairs of buildings	50,630 30	18,342 62	28,218 80
7. Repairs of locomotives	48,602 23	57,348 92	31,050 02
8. Repairs of cars	59,370 17	85,932 56	59,370 17
9. Repairs of tools	2,492 01	3,675 37	2,492 01
10. Administration	51,918 41	59,078 89	51,918 41
11. Station service	98,907 30	155,725 23	98,907 30
12. Conductors, baggagemen and brakemen	95,345 49	89,893 85	95,345 49
13. Engineers, firemen and wipers	100,575 95	106,958 83	100,575 95
14. Train and station supplies	23,711 11	24,594 95	23,711 11
15. Fuel consumed	229,839 45	107,938 71	67,868 80
16. Oil and waste	6,996 88	6,099 98	6,996 88
17. Personal injuries	1,343 34	8,185 55	1,343 34
18. Damage to property	1,617 59	1,386 55	1,617 50

19. Loss and damage baggage and freight	3,630 34	4,183 68	3,630 34
20. Taxes	98,482 68	98,482 68	98,482 68
21. Insurance	8,460 94	5,475 51	8,460 94
22. Mileage of cars	4,100 02	12,621 10	4,100 02
23. Sleeping car expenses	862 49	4,279 18	862 49
Total	$1,520,309 92	$1,092,075 55	$1,000,878 44
Expenses per train mile (cents)	119 4	85.8	78.6

It will be noticed that Mr. Earling's excess over the train mile estimate is gained largely on the items of repairs of track, renewal of rails, renewal of ties, and fuel consumed. On these four items he exceeds the train miles as follows:

Repairs of track	$93,797.43
Renewal of rails	117,036.12
Renewal of ties	156,784.35
Fuel consumed	121,900.74
	$489,518.64

We have demonstrated that these items depend upon the number and weight of the trains, and therefore Mr. Earling must be mistaken in his estimate. Mr. Earling's estimate amounts to 119.4 cents per train mile; at this rate the expense on the complaintant's system of road would amount to $25,312,138.52, instead of $18,577,539.08.

Distribution of Operating Expenses.

The first distribution will be as between the freight and passenger service. This distribution will be made largely on the train mileage basis.

Exhibit 34, page 610, shows the train mileage as follows:

EXHIBIT 34 (Defendant's.)

Revenue Train Mileage—Year ending June 30th, 1897:

	Entire System	South Dakota
Freight trains	12,387,036	589,924
Passenger trains	7,819,919	435,717
Mixed trains	992,511	246,901
Revenue trains	21,199,446	1,272,542

Is is usual to count 25 per cent. of the mixed train mileage as passenger and 75 per cent. as freight, and we find that Mr. Winnie has done so in making his estimate.

In this case, however, we mean to charge up to the freight traffic all that can possibly be charged to it to the end that there can be no possible question but what the freight service is charged with all that it should be.

While there at first appears to be some reason for charging the passenger service with a share of the mixed train expense, yet the passenger earnings on the mixed trains can hardly amount to 25 per cent. of the total earnings of such trains, while the expense of running such trains is not materially increased by the fact that a few passengers are carried in the caboose.

As a compensation for this passenger earning by the freight department we find that the passenger department transports the employes of the road, carries all the newspaper men who have advertising mileage, and

in many ways performs service for the benefit of the entire traffic for which it receives no credit or compensation.

In any event none of the expense is omitted, it is included either as freight or passenger expense.

Accordingly we find that the 1,272,542 miles consist of 836,825 freight train mileage and 435,717 passenger train mileage.

On this basis we find that 65.76 per cent. of the mileage is freight and 34.24 per cent. is passenger.

To avoid carrying the fractions we will use the even figures, 66 per cent. and 34 per cent. in our comparison.

These percentages are used in apportioning all the items except fuel for locomotives, and conductors, baggage and brakemen and repairs of cars. It appears from the testimony that the freight train locomotives consume nearly two times as much coal per train mile as the passenger locomotives. It also appears that the trainmen on the passenger trains run nearly two times as many miles for a month's wages as the freight trainmen. On this basis we find that 21 per cent. of the fuel and trainmen's wages should be charged to passenger service and 79 per cent. to freight service. The car mileage item is exclusively freight and sleeping car expense is exclusively passenger expense.

We apply the distribution to the three estimates and the following table shows the result:

DISTRIBUTION OF OPERATING EXPENSES AS BETWEEN THE FREIGHT AND PASSENGER SERVICE

		FREIGHT			PASSENGER		
		Earling	Train Mileage	Defendants	Earling	Train Mileage	Defendants
1	Repairs of track	$132,754.70	$70,848.39	$132,754.70	$68,388.77	$36,497.65	$68.388.77
2	Renewal of rails	104.234.45	26,980.61	10,414.49	53,696.52	13.904.24	5,365.03
3	Renewal of ties	136,353.36	32,875.69	26,721.02	70.242.64	16,935.96	13,765.37
4	Repairs of bridges	37 253.88	26,992.31	37.253 88	19,191 39	13,905 12	19,191.39
5	Repairs of fences	7,463 02	1,928.27	1,367 22	3 844.58	993.35	704.32
6	Repairs of buildings	33.416.00	12,106.14	18,624.41	17,214.30	6,236.48	9,594.39
7	Repairs of locomotives	32,077.48	37,850.28	20,493.02	16.524.75	19,498 64	10,557.00
8	Repairs of cars	35,576.91	56,715.48	35,576.91	23,793.26	29.217.08	23,793 26
9	Repairs of tools	1,644.73	2,425.74	1,644.73	847 28	1,249.63	847.28
10	Administration	34,266.16	38.991 95	34.266.16	17,652.25	20,086.94	17,652.25
11	Station service	65.278.82	102,778 65	65,278.82	33,628 48	52.946.58	33,628.48
12	Conductors, baggagemen and brakemen	75 322 94	71,016 15	75.322.94	20,022.55	18,877.70	20,022.55
13	Engineers, firemen and wipers	66,380.13	70,592.82	66.380.13	34,195 82	36,366.01	34,195.82
14	Train and station supplies	15,649 34	16,232.66	15,649 34	8,061 77	8,362 29	8,061.77
15	Fuel consumed	181,573 17	85,271.59	53 616.36	48 266 28	22,667.12	14,252.44
16	Oil and waste	4,617.95	4,025.98	4,617.95	2 378 93	2,074 00	2,378.93
17	Personal injuries	886 61	5,402.46	886.61	456 73	2,782.89	456.73
18	Damage to property	1,067.55	915.12	1,067 55	549.95	471.43	549.95
19	Loss and damage baggage and freight	2,396 03	2,761.22	2,396 03	1 234.31	1,422.46	1.234.31
20	Taxes	64,998.57	64,998.57	64,998.57	33,484.11	33,484.11	33,484.11
21	Insurance	5,584 33	3,613 83	5.584 33	2,876.61	1,861.68	2,876.71
22	Mileage of cars	4,100.02	12,621.10	4,100.02	.....	.....	.....
23	Sleeping car expenses	.....	.....	.....	862.49	4,279 18	862 49
		$1,042,891.16	$747,955.01	$679,015.06	$477,413 76	$344,120.54	$321,863.38
	Average per train mile (cents)	124.62	89.38	81.14	109 56	78 97	73.88

Distribution of the Operating Expenses as between the Inter-State and Local Freight Traffic.

This brings us to the most important proposition in this case.

We have found that the expenses chargeable to the freight traffic amount to $679,015.06.

How much of this should be charged to local and how much to inter-state freight?

Three methods of disposing of this question have been suggested:

1st. By a system of percentage based on the relation of expenses to earnings.

2nd. On the basis of the dollars earned.

3rd. On the basis of the tons hauled.

We will discuss and apply these three methods.

Complainant insists upon solving the proposition by the first method. They first offered testimony tending to show that it cost at "least twice or three times as much to do the local business as it does to do the through business." (Mr. Earling, page 236).

Complainant then offered testimony tending to show that the average cost of operation on the system was 60 per cent. of the earnings, and that on this basis the cost of local business would be 85 per cent. of the earnings on local business. Counsel for complainant, in their brief in the Circuit Court (we have not yet received their

brief in this Court), on page 20, state the proposition as follows:

"Having established that it costs at least 85 per cent. of the entire local earnings to pay the local operating expenses, and having learned the exact percentage of reduction in freight and passenger earnings made by the proposed schedule, it is easy to apply these percentages to the business and to learn therefrom the exact effect of the proposed schedule upon complainant's earnings in South Dakota. The cost to complainant for local operating expenses being at least 85 per cent., it follows that, for every $100 earned, $85 has been expended in earning it. Now, if the earnings from freight be reduced by the schedule 17.44 per cent. (as the evidence conclusively shows they are), then it follows that for each $100 earned under the existing schedule, there would be earned $17.44 less, or only $82.56."

At first glance, it would seem that this method has received the approval of this court by reason of the fact that the Nebraska case was disposed of on some such basis.

A careful examination of the Nebraska case leads us to the conclusion that this was the only method presented to the court, and that the data before the court practically limited it to this method, and the opinion is silent on the question of how to determine the sum to be charged against local traffic on account of expenses

of operation, interest and dividends. The only deduction we are able to make from the opinion as a whole on this question is that it must be calculated without reference to the inter-state business done by the carrier, or the profits derived therefrom.

The United States Circuit Court in North Dakota disposed of the North Dakota maximum rate case upon this method of percentages.

This judicial recognition of this method makes a careful examination and analysis necessary.

Our first criticism of this method is the hypothetical proposition on which it rests. If it costs 60 cents to earn a dollar as an average proposition, how much would it cost to earn a dollar on local traffic? The expert witness answers, "85 cents."

This expert opinion is then taken as the basis for further computation, regardless of the fact that the fact itself is definitely ascertainable.

This hypothesis rests upon the assumption that revenues and expenses are interdependent.

Let us apply this proposition to the facts in this case and see what will be the result.

We have the following testimony, showing the tonnage in South Dakota, (pages 608-610):

Q.—Mr. Winnie, have you prepared a statement showing the tons of freight moved in South Dakota,

both local and inter-state, for the month of September, 1896?

A.—I have, sir.

Q.—How does that month compare with the other months as to being an average month for the year 1897?

A.—It is very nearly an average month.

Q.—As nearly as could be obtained?

A.—As nearly as could be obtained; yes, sir.

EXHIBIT 33 (Defendants).

Chicago, Milwaukee & St. Paul Railway Co.'s Line in South Dakota—Freight Statistics, month of September, 1896:

	Local.	Inter-State.	Total.
Tons of freight moved.....	2,815	105,549	108,364
Tons one mile.....	182,918	7,860,982	8,043,900
Average haul, miles.....	65	74	74

Multiply by 12 and we have the annual tonnage for the fiscal of 1897, as follows:

	Local.	Inter-State.	Total
Tons of freight moved.....	33,780	1,266,588	1,300,368
Tons one mile.....	2,195,016	94,331,784	96,526,800

The operating expenses chargeable to freight traffic divided by the total tons hauled one mile gives us the average cost to move one ton of freight one mile in South Dakota, as follows:

On Mr. Earling's estimate, 1.08 cents.

On train mileage estimate, .77 cents.

On defendant's estimate, .70 cents.

Complainant has proven in this case that all freight business in South Dakota is local in its nature and that the increased cost of local freight applies to the entire tonnage, without regard to its being either local to the state or inter-state business.

On this proposition Mr. Earling testifies as follows, (page 241):

Q.—Now, I will ask you to state, Mr. Earling, whether the freight trains conducting the business of this company in South Dakota are properly classed as local trains or through trains?

A.—They are all local trains. Occasionally, however, during the fall months when there is some live stock moving from Chamberlain, which comes from across the river, and when grain is moving freely, we sometimes have a full train out of Eureka, and we have occasionally a full train of stock out of Chamberlain; but that happens only occasionally during the three fall months, say, September, October and November.

Q.—The freight trains in South Dakota, whether they are engaged in an exclusive local business or are carrying what is know as inter-state traffic, are all operated in the manner that local trains are operated and must be so for the reasons you have given?

A.—It must be so, because there is not sufficent traffic to run through trains, except the instances I have stated that occur in the fall months, occasionally with

wheat from Eureka, and occasionally with stock from Chamberlain. I will state further that as the freight is concentrated at Aberdeen, from the various lines running into Aberdeen, we get full trains out of Aberdeen eastward, that is, we get full trains during the time the grain is moving for the three months I have mentioned.

Q.—While a local train, whether it has some through business or not, is a train that stops either to take on or let off freight?

A.—That is correct.

Q.—You have stated that it costs two or three times as much in proportion to the earnings derived from the traffic to conduct local business than it does to conduct through business. Is that estimate fairly applicable to the business of the South Dakota line, as compared with the system as a system?

A.—It is a conservative statement, I should say. We have kept some statistics to show what it costs for the wages of engineers and firemen, the wages of conductors and brakemen, the cost of fuel, and the cost of supplies for locomotives and caboose cars; and those items only, nothing else entering into it, to haul 100 tons of freight one mile. These statistics show that on the line extending from Mitchell to Sioux City, it cost during the month of December, 1897, for those items which I have mentioned, *23.88 cents to haul 100 tons of freight one mile,*

Mr. Harrahan of the Illinois Central testified concerning this question as follows, (page 597).

Q.—In speaking of your line into Sioux Falls, I understood you to say that all the business upon that line was, in its character, local.

A.—Practically so. Of course, there is a little through business into Sioux Falls. It is practically so.

Q.—So that the figures which you have given us, relative to that line, would be an example of a line doing nothing but a local business?

A.—Practically a local business.

Q.—The fact that the line of road crosses the state line does not change the problem?

A.—Not unless the other conditions change.

Q.—If the business of the Chicago, Milwaukee and St. Paul Railway Company in South Dakota was that of gathering freight in that state to be shipped east, and of distributing freight shipped to that state from the east, the fact that it may have originated in Chicago and have been hauled 500 miles before reaching the state would not relieve it of that character of local freight until it reached the point where the distribution began, or where the gathering ceased?

A.—That is what we call local freight, when you commence to distribute at any point. For instance, we load a car for points on the Sioux Falls branch. That would go on a through train from here to Cherokee, Iowa, and

then be taken on a local train and be distributed at five or six or whatever number of stations there is, to be unloaded between there and Sioux Falls. That is what we call local freight. The same is true in the other direction. We start with one or two cars of freight and stop at various stations and pick up corn and wheat and other freight until we get to Cherokee, Iowa. There it is put in a through train and goes through to Chicago or St. Paul or Minneapolis in through trains. That is what we call local and through business.

Q.—So that you understand the proposition clearly, when this freight is gathered up between Sioux Falls and Cherokee, the fact that it be destined for Chicago, or some other distant point, does not divest it of its local character until it reaches Cherokee?

A.—Yes, sir; until it is put in the through train. It is billed at the various station where it is picked up through to its destination at Chicago, if it is coming here or going beyond.

So that by the testimony of these expert witnesses we are not to multiply this average cost in South Dakota by the "two or three times" theory because the inter-state and local freight is hauled on the same trains and under the same conditions and at the same expense per ton.

Hence, we multiply the local tonnage, 2,195,016 tons one mile by the average cost per ton mile and we have

the following result as the cost of handling the local freight:

On Earling's estimate $23,706.17
On train mile estimate 16,901.62
On defendant's estimate 15,365.11

Now, let us apply the 85 per cent. theory. The revenue from local freight is stated at $102,289.23; 85 per cent. of this sum is $86,945.84. That this is the contention of complainant is fastened beyond question by the statement in the brief of counsel that the revenue from local business for 1897 was $102,289.23; that the cost of earning this money was 85 cents on the dollar, and hence the net revenue was only $15,343.38.

If it cost $86,945.84 to haul 2,195,016 tons one mile, the average cost per ton mile would be 3.96 cents.

Deduct this $86,945.84 from the total freight expense and we have left as the cost of inter-state freight the following:

On Earling's estimate $955,950.32
On train mile estimate 661,009.17
On defendant's estimate 592,069.22

These sums divided by the inter-state tonnage gives the cost of interstate freight per ton mile as follows:

On Earling's estimate ..... 1.01 cents
On train mile estimate ..... .70 cents
On defendant's estimate ..... .63 cents

This shows as the result of the 85 per cent. theory

that the inter-state freight has cost on Earling's estimate 1.01 cents per ton mile and the local freight has cost 3.96 cents per ton mile; yet these 85 per cent. expert witnesses testify that under the conditions existing on complainant's lines in South Dakota there is no difference in the cost of transporting local and inter-state freight.

On this 85 per cent. theory it costs 3.96 cents per ton mile to transport local freight, and it costs just the same to transport inter-state freight; hence, if the position is tenable, then it has cost complainant $3,717,537.64 to transport its 94,331,784 tons of inter-state freight one mile. Add to this the $86,945.84, cost of local freight, and we have $3,804,483.48 as the total cost of transporting freight in South Dakota.

We can take Mr. Earling's estimate of actual expenses, amounting to $1,042,891.16 on the freight, and apply his "two to three times" theory and yet not equal the expense as figured on this 85 per cent. theory.

The error in this 85 per cent. theory is this: The deduction is based upon an average expense of 60 cents as compared with an average revenue of $1.00. These averages have been obtained from transactions equaling one cent a ton mile freight revenue, and .6 of a cent a ton mile freight expense. For instance, the complainant's revenue from freight for 1897 was 1.008 cents per mile. Its operating expenses were 60.94 per cent. of its revenue. (Page 31, 1897, annual report).

Now it is conceded that the local traffic costs more than through business, but this increased cost does not apply to all the items in the list of operating expenses. For instance, local freight does not increase the president's salary, nor the rail and tie renewal, nor the taxes; but this increased cost applies more directly to train expense, and when these witnesses say that it costs three times as much to haul local freight, they have reference only to train expense.

For instance, Mr. Truesdale of the Rock Island Railway testifies, (page 327):

Q.—If 60 per cent. was a fair percentage for the operating expenses of a railway system situated as the St. Paul is, what in your judgment, would be about the percentage of operating expenses to earnings of the lines in South Dakota, considering the difference between local business and the business of the system as a whole?

A.—The item of expense would be relatively greater in South Dakota, as I explained this morning. Briefly, the expenses of transportation, the business being largely local, as against a great percentage of the business of the lines of the St. Paul road being through business, and figuring that the transportion expenses average generally somewhere between 30 and 33⅓ per cent. of the total expense, I think that is not very wide of the mark, I should think the percentage of gross earnings in

South Dakota, would be somewhere in the neighborhood of 85 or 90 per cent.

And again on page 332:

Q.—When you assume the operating expense would be about 85 to 90 per cent., what would that be 85 or 90 per cent. of?

A.—Such gross earnings as would fairly be apportioned to it, in the adjustment of its account, if separate accounts were kept between South Dakota lines and other lines.

Q.—Upon what basis of division of those earnings?

A.—I should say upon a mileage basis; I do not see any other you could use, in determining the relative earnings of a system of road like the Chicago, Milwaukee and St. Paul Railway, located in several states.

Q.—So your position is that, according to your best judgment, the operating expenses in South Dakota would be from 85 to 90 per cent. of the earnings from operation, based upon a division upon the mileage basis?

A.—Well, I took the earnings and relative operating expenses of the system as a whole, giving the earnings on a mileage basis. I understand that is the way the earnings have been apportioned, and figuring on that basis, and assuming a large percentage of the South Dakota business is local business, which I understand is the case, in my judgment it would figure in that way.

Q.—Now, if the earnings on operation on the mileage

basis was $1,000,000 per annum, you would say the operating expenses would not exceed $850,000 to $900,000?

A.—I figured it on an estimated basis, as I say.

On this basis, as outlined by Mr. Truesdale, about 20 cents of this 60 cents' expense to earn $1.00 is transportation expense. For local freight we figure two to three times this 20 cents, making according to his testimony 85 to 90 cents, or as he put it 85 to 90 per cent.—85 or 90 per cent. of what? Why, it could only be of this average one cent per mile. This would give us the expense of handling local freight—at from .85 to .90 cents per ton mile and comes very close to our estimate.

The revenue from local freight is $102,289.23. Divide this sum by the local tonnage, 2,195,016 tons one mile, and we have a revenue of 4.66 cents per ton mile.

Now, if we apply this percentage to the actual revenue without regard to its being higher or lower than the average from which the percentage has been deduced, we make the error leading to the results we have been illustrating.

Eighty-five per cent. of the 4.66 cents revenue gives an expense of 3.96 cents per ton mile whereas we have demonstrated that allowing Mr. Earling's high estimate of operating expenses the expense does not exceed 1.08 cents per ton mile.

In the North Dakota case the Court found that the operating expenses of the Northern Pacific averaged

68.84 per cent. of its revenues. That the extra cost of local business was 31.41 per cent., and that the total cost of doing local business was 100.25 per cent. That the reduction of 13 per cent. reduced the revenues to 87 leaving a deficit of 13.25.

The result of this figuring is this: The Court has taken the hypothetical case that an average expense of 68.84 produced an average revenue of 100. That having relation to these figures, the local business cost 100.25, but the Court has failed to find how much the revenue from local freight exceeds the average 100.

In other words, the Court has advanced the cost from the average of 68.84 to the actual of 100.25, but failed to advance the revenue from the average of 100 to the actual, which in our case would be 4.66.

In our case the proposition would be that it costs on an average for one hundred miles 60 cents a ton. That the average revenue is $1.00. That it costs 85 cents to haul a local ton 100 miles. This would be all the data required by the North Dakota "formula," and we would simply apply the proposed reduction of 17 per cent., thus reducing the revenue to 83 cents, and figure out a deficit of 2 cents. We have found, however, that the revenue from local business would be $4.66 for the hundred mile haul and that instead of a deficit there would be a profit, after applying the 17 per cent. reduction, of $3.02.

In the Nebraska case the Court finds that the Burlington hauled (1893) 93,703,675 tons local freight one mile at an expense of $938,147. This amounts to one cent a ton per mile. This seems like a fair statement of the cost of local business, but we can not understand the revenue side of the proposition in the Nabraska case.

It appears that the revenue on the 93,703,675 local tons one mile was $1,242,416.00. This would amount to 1.32 cents per ton mile.

It appears that the revenue on the 357,131,753 inter-state tons one mile was $4,730,940.00. This would amount to 1.32 cents per ton mile.

Divide the local tons one mile by the local tons carried and we have an average local haul of 160 miles. Divide the inter-state tons one mile by the inter-state tons carried and we have an average inter-state haul of 160 miles.

The revenue from the local tons is stated as being $2.13 per ton, and by computation we find the revenue per ton of inter-state freight to be $2.13.

Thus it is made to appear that the revenue derived from local and inter-state business, per ton mile, is identical.

We find that according to Mr. Dilworth's tables, each of the roads are hauling local and inter-state freight for exactly the same average distance and for the same average revenue per ton and per ton mile.

It is impossible that any such conditions exist in Nebraska, and hence we are led into an investigation of Mr. Dilworth's tables.

Mr. Dilworth, in his testimony, does not give the formula by which he prepared those tables, but it would seem that he has taken the total freight revenue, divided it by the total tons hauled, thus getting the average revenue per ton.

Now, from what we know of the reports on file with the commissioners, or board of transportation, he would have no data which would tell him how many tons of the total tonnage were tons of local freight or tons of inter-state freight, and Mr. Dilworth admits this in his testimony, (page 656 Nebraska case.) The figures contained in these tables are the same that would be obtained by dividing the local freight revenue by the average revenue per ton and setting down the result as the actual number of tons of local freight.

(In making comparison we will use the Burlington for 1893.) That is to say we first divide the total revenue, $5,973,356, by the total tons 2,804,299 (local 583,294, through 2,221,005) thus finding the average revenue per ton hauled to be $2.13. We then divide the local revenue, $1,242,416, by this average of $2.13 and we get 583,294 as the number of tons of local freight. We find on page 331 Inter-state Commerce Commission statistics of railways for fiscal year ending June 30th, 1893, that

the Burlington (C., B. & Q. west of the Missouri river) reports its average revenue per ton mile on all freight traffic to be 1.325 cents. We assume that the reports which Mr. Dilworth refers to show the same figures. Divide the average revenue, $2.13 by the average per ton mile 1.325 cents, and we have an average haul of 160 miles. Divide the local revenue, $1,242,416, by the ton mile, 1.325 cents, and we have 93,767,245 as the tons hauled one mile. These last figures do not agree exactly with Mr. Dilworth's estimate of 93,793,675, but are very close.

From the foregoing it will be seen that the only actual data contained in Mr. Dilworth's tables is the revenue from local and inter-state freight, and that the tonnage figures both as to tons hauled and tons one mile are the result of averages and therefore fictitious. It is impossible to determine from those tables the actual local tonnage and consequently we can not ascertain just what service was actually rendered to earn the $1,242,-416 of local freight revenue.

The result was that the question of local freight earnings was disposed of on the basis of an average operating expense raised 10 per cent. to make it actual, and applied against an average revenue.

When we consider these facts we can understand the eagerness of the roads to accept and stand on Mr. Dilworth's tables.

We find that Mr. Taylor, the auditor of the Burlington, testified (pages 270, 271) that for the year 1892, the freight revenue in Nebraska averaged 1.332 cents per ton mile, while the local freight revenues averaged 2.079 cents per ton mile. If we divide the local revenue (for 1892 as stated by Mr. Dilworth) $1,237,884 by the local tons one mile, 91,139,965, we get an average revenue of 1.35 cents per ton mile.

Assuming that the auditor has correctly stated the local revenue at 2.079 cents and divide the total local revenue by this rate per ton mile we get 59,542,150 as the local tons one mile, showing a much less service to earn the revenue than that shown by Mr. Dilworth's tables of 91,139,965 tons one mile.

We have not the data with which to work out the actual figures on local freight in Nebraska and compare them with the figures in Mr. Dilworth's tables, but to show the extent of the error in accepting those tables as actuals instead of averages, we will now apply Mr. Dilworth's method to the facts in the case at bar and compare the results with what we know to be the actual facts.

The total freight traffic in South Dakota amounted to 1,300,368 tons hauled an average distance of 74+ miles, and equals 96,526,800 tons one mile.

The total freight revenue was $1,074,741.86 (page 25), or 82.6 cents per ton and 1.11 cents per ton mile.

We divide the local revenue, $102,289.23 by the average revenue of 82.6 cents per ton and thus get 123,836+ tons of local freight. Divide the $102,289.23 by the 1.11 cents per ton mile and we get 9,215,245 tons one mile. We divide the inter-state revenue, $972,452.63, by the average 82.6 cents and we get 1,177,303 tons hauled. Divide $972,452.63 by the 1.11 cents, we get 87,608,345 tons one mile. The actual figures for these several items have been shown to be as stated in the following comparative tables. The comparison is as follows:

	Local Tons.	Inter-State Tons.	Local Tons 1 mile.	Inter-State 1 mile.
Dilworth's method...	123,836	1,177,303	9,215,245	87,608,345
The actual figures....	33,780	1,266 588	2,195,016	94,331,784

	Local Revenue.			Operating Expenses.		
	Total.	Per Ton.	Ton Mile.	Total.	Per Ton.	Ton Mile.
Dilworth's method	$102,289.23	$ .826	1.11	(1) $73,709 53	59.5	.79
The actual facts...	102,289.23	3.02	4.66	(2) 25,352.43	75.5	1.155

(1) Estimated at 65.51 per cent. of revenue with an additional 10 per cent. for increased cost of local freight, same as Burlington for 1893.

(2) Estimated on train mileage basis and Truesdale's formula for increased cost of local freight.

	Net Profit.		
	Total.	Per Ton.	Per Tn mile.
Dilworth's method	$28,579.70	23.1	.32
The actual facts.....	76,936.80	226 5	3.505

If there still remains a doubt as to Mr. Dilworth's tables being constructed from the averages on the several lines of railway that doubt will be dispelled by consulting the Inter-state Commerce Commission's railway statistics for the years 1891, pages 342-3; 1892, pages 320-1; 1893, pages 330-1.

Take the average revenue per ton mile as stated in these reports and divide the local revenue as stated by Mr. Dilworth, and you will have the tons one mile as stated in his tables, with only such slight differences as result from the fact that Mr. Dilworth has ascertained the local earnings by saying that they were a certain per cent. of the total. (See last question and answer of Mr. Dilworth, page 653 Nebraska case) and unless he has carried out the fractions on his percentage to three or four decimals he would not be exact.

Then again the result will be varied a little by the fact that Mr. Dilworth's revenue corresponds with item 11, while the ton mile revenue is calculated on the revenue stated in item 9 of the report. Take the case of the C. St. P. M. & O. R'y, where the report covers only the lines in Nebraska and the facts are more easily developed than on the Burlington which covers lines in other states and which are not included in Mr. Dilworth's estimates.

It will also be noticed that the average haul on the Burlington and the C. St. P. M. & O. R'ys are indentical, 160+ miles, yet the average revenue per ton mile on the Burlington is 1.325, while the other is only .933. This is due to the fact that the Burlington hauls a greater proportion of high rate local freight than the other company. The local freight could not have this influence if it were carried on the same basis of rates as the through freight.

The result of disposing of the Nebraska case on Mr. Dilworth's tables was that the Burlington was charged with $1,242,416 of revenue from local freight and was credited with the expense of having transported a local tonnage equal to one ton 93,793,675 miles, when in fact it had not transported any such quantity of local freight.

This is not intended as a criticism upon the disposition which the Court made of that case, because Mr. Dilworth's tables constituted the only data before the Court, while we have gone outside of the record to support our argument, something the Court was under no obligation to do, if indeed it had the right to do so.

We repeat our proposition once more.

The average revenue on freight is equal to 100 cents for one ton 100 miles. The average cost is 60 per cent. of the average revenue, or 60 cents for one ton 100 miles. One-third of this 60 cents is direct cost of transportation and this direct cost of transportation is increased two or three times in hauling local freight, so that the expense of hauling the ton 100 miles as local freight would amount to 85 or 90 cents, or 85 to 90 per cent. of the 100 cents average revenue.

We have now advanced the cost from the average of 60 cents to the actual cost of 85 to 90 cents, and in order to determine whether there is a profit or not we must advance the revenue from the average of 100 cents to the actual revenue of $4.66 for one ton 100 miles.

This is admitted by Mr. Truesdale in the following questions and answers, page 332:

Q.—When you assume the operating expense would be about 85 to 90 per cent., what would that be 85 or 90 per cent. of?

A.—Such gross earnings as would fairly be apportioned to it, in the adjustment of its account, if separate accounts were kept between South Dakota lines and other lines.

Q.—Upon what basis of division of those earnings?

A.—I should say upon a mileage basis; I do not see any other you could use, in determining the relative earnings of a system of road like the Chicago, Milwaukee and St. Paul Railway, located in several states.

Q.—So your position is that, according to your best judgment, the operating expenses in South Dakota would be from 85 to 90 per cent. of the earnings from operation, based upon a division upon the mileage basis?

A.—Well, I took the earnings and relative operating expenses of the system as a whole, giving the earnings on a mileage basis. I understand that is the way the earnings have been apportioned, and figuring on that basis, and assuming a large percentage of the South Dakota business is local business, which I understand is the case, in my judgment it would figure in that way.

Q.—Now, if the earnings on operation on the mileage basis was $1,000,000 per annum, you would say the op-

erating expenses would not exceed $850,000 to $900,000?

A.—I figured it on an estimated basis, as I say.

The witness does not say that the cost would be 85 to 90 per cent. of the $102,289.23 revenue from local freight, but that it would be 85 to 90 per cent. of all the business, to-wit: The total revenue of $1,074,741.86. This would mean that the freight would cost about $850,000 to $900,000. This is a little less than Mr. Earling's estimate, and a little more than our estimate, and considering that Mr. Truesdale was expressing an opinion and not testifying from positive knowledge he has come very close to the facts.

The Distribution on the Basis of the Dollars Earned.

To charge the local freight with its revenue share of the operating expenses we would figure as follows:

The total freight revenues on South Dakota lines amounted to $1,074,741.86, and the operating expenses are equal to:

On Earling's estimate, 97. cents per dollar of revenue.
On train mile " 68.9 " " " " "
On defendant's " 63.1 " " " " "

The revenue from local freight amounts to $102,289.23 and on this basis the local freight would be charged with operating expenses as follows:

On Earling's estimate, $99,220.65.

On train mileage estimate. $74,597.14.

On defendant's estimate, 67,816.21.

From what we have heretofore figured out it will be seen that these results are far from the real fact; not only this but we are confronted with the serious objection to this method that it violates the injunction of this Court in that the revenues from inter-state business have a decided influence on the result.

To illustrate, suppose the earnings from inter-state business should be increased by raising the freight rates 50 per cent. so that revenues from the same tonnage of inter-state freight would amount to $1,478,678 instead of $972,452. Then the inter-state $1,478,678 and the local $102,289 would amount to $1,580,967. This would amount, on Mr. Earling's estimate, to 65.9 cents per dollar of revenue, and would reduce the local freights share of operating expenses from $97,481.63 to $67,408.45 without any change whatever either in the tonnage or revenues of local freight.

On the other hand suppose a reduction of the inter-state freight rates of 25 per cent., so that the revenues would be reduced from $972,452 to $729,339, then the total revenues would amount to $831,628; and on Earling's estimate the operating expenses would amount to 125 cents to every dollar of revenue, and the local share would be $127,861.

Another serious objection to this method, is the dispute which would at once arise over the question of the share of the inter-state revenues to be credited to South

Dakota. We would at once contend that the total earnings are not properly stated by complainant, because they apportion the inter-state revenues on the mileage basis. They claim it costs three times as much to do the gathering and distributing part of the work of handling freight, and yet they only apportion to us a per mile share of the revenues arising from inter-state traffic.

The agreements between railway companies for division of joint freight earnings disclose the fact that among themselves by voluntary agreement they give more than a per mile share of the earnings to the road that does the gathering and distributing. We have here an inter-state traffic amounting to 1,266,588 tons hauled an average distance of 286.5 miles, 74 miles of which is in South Dakota and 212.5 miles on lines east of us. The total revenue derived from this business was $3,636,897.23 (page 787), of which $972,452.63 was apportioned to South Dakota. It amounts to $2.95 a ton, and 76.77 cents was South Dakota's share. We turn to the agreements for division of joint earnings and we find that for a haul of 74 miles or less on the road doing the local work and a haul of 212.5 miles or greater on the through line that the earning is divided on the basis of 40 per cent. to the local road and 60 per cent. to the through line. Apply this to the $3,636,797.32 and South Dakota would receive $1,454,758.88 instead of $972,452.63.

In this connection the following testimony of Mr. Chappel of the Alton railway becomes interesting, (pages 344-345):

Q.—Suppose that a train should start at a point 100 miles west of the east state line of the state of South Dakota and run as a local train to the state line, 100 miles, and should gather along the route twenty cars of wheat, making an average haul of fifty miles, and then the train should be taken from there to Chicago, a distance of 500 miles; that the earnings derived from the transaction would be $55 per car or $1,100 for the train; what would you say was an equitable division of those earnings?

A.—As between the 100 miles and the 500 miles?

Q.—Yes.

A.—The only recognized division is on a mileage basis.

Q.—What would you say was an equitable division?

A.—I think that is entirely equitable, it is considered so among railroad men, the nearest to a fair division that can be had.

Q.—That division would give $100 for the operation of the train 100 miles and would give the main line $1,000 for the operation of that train 500 miles?

A.—The return of the train another 500 miles; these cars have to go back.

Q.—That would not affect the relative value, would it?

A.—$2.00 per mile would be a good fair freight per mile, but you must run the train back.

Q.—The branch line has to haul the empties to the other end the same, so that the relative positions are the same?

A.—Certainly.

Q.—Would you say that was an equitable division of those earnings?

A.—That is the usual mode.

Q.—And the usual mode then would give $1,000 for a 500 mile haul on through freight as against $100 for a 100 mile haul on local freight?

A.—Yes; according to your figures.

Q.—And yet it seems to be conceded that the expense of operating the local freight is two and one-half to three times as great as the through freights?

A.—Yes, sir.

If the South Dakota division of the complainant's railway is doing the local gathering and distributing of an inter-state freight, the long through haul of which is over complainant's main lines outside of South Dakota, then South Dakota lines ought to be credited with such relative share of the earnings of such business as the value and character of such local service bears to the value and character of the entire service.

Complainant contends that its local rates in South Dakota are not high enough to yield an adequate compen-

sation for the transportation of local freight. If this is true, then certainly the South Dakota lines ought to be credited for the local haul of inter-state freight with a sum equal to the amount they would have received for a corresponding haul of freight local to the state.

This inter-state traffic in 1897 amounted to 1,266,588 tons hauled an average distance of 286.5 miles, 74 miles of which was in South Dakota. The revenue amounted to $3,636,897.23. By reference to "Exhibit 68," (page 801), we find that the local rate for 75 miles will average about 41 per cent. of the rate for 290 miles, hence if South Dakota lines are to be compensated for the local haul of inter-state freight they ought to receive 41 per cent. of the revenue derived from the inter-state traffic. This would amount to $1,491,127.86, whereas the amount on the mileage basis only amounts to $972,-452.63. This is very close to the division which the roads themselves make under their division agreements.

Thus we would at once be involved in a useless controversy because the cost of local freight can and ought to be determined without reference to the revenues. It has cost just so much to transport the tons of South Dakota freight and that cost is not in the slightest degree affected by the question of how much the complainant has received for transporting either inter-state or local freight. It is possible that the traffic manager would consider the cost of transportation in naming a

freight rate, but in view of the testimony of the traffic manager that he had been engaged in making rates for over 30 years and during that time had never had an opportunity of making a tariff on a basis of what the service was worth and never had an opportunity to determine the rate by the value of the service. *The rates are made what they must be. There is not a place on the St. Paul lines (C. M. & St. P. Ry) where the rates are made with reference to the value of the service to be performed* (191.) *They are not based upon the value of the service* (192.) Such a possibility is very remote.

Again, by this method, the larger the revenue from local freight the greater the burden imposed. We have found that the revenues from local freight now amount to 4.66 cents a ton mile; suppose complainant should double its local freight rates and charge us 9.32 cents a ton mile. The revenues would amount to $204,578 local, and $972,452 inter-state, making a total of $1,177,030, and the expense, on Mr. Earling's estimate, would be 88.6 cents per dollar of revenue. On this basis the local expense would amount to $181,-265.51.

It would be just as logical for us to insist that local freight should be hauled free because if there was no revenue there would be no expense.

The Tonnage Basis.

We insist that the only logical way of distributing

this operating expense as between the inter-state and local freight is to distribute it on the basis of the tons hauled. If a train runs 100 miles carrying 100 tons of freight, 97 tons of which are inter-state freight and 3 tons local freight, then the cost of operating such train should be charged 97 per cent. to inter-state and 3 per cent. to local, with such allowance for increased cost of local freight as the testimony may warrant. On this basis we determine the true cost without any entanglement with revenue propositions. It does not matter whether the company is carrying inter-state freight or local freight on a profitable or unprofitable scale of freight charges.

On this basis we find that the total tons one mile were 96,526,800. This makes an expense per ton mile of 1.08 cents on Mr. Earling's estimate, 77 cents on train mile, and 70 cents on defendant's estimate. Of this 96,526,800 tons one mile, 2,195,016 were local tons one mile. This multiplied by the cost per ton mile gives us:

On Earling's estimate	$23,706.17
On train mile estimate	16,901.62
On defendant's estimate	15,365.11

While the testimony shows that inter-state freight costs just as much as local, yet for the sake of being more than fair we will apply Mr. Truesdale's formula. That is, if the expense was 60 cents, he would increase it to 85 or 90 on local freight.

To increase it to 90 is to increase the 60 just 50 per cent., hence we find the cost of local freight to be:

On Mr. Earling's estimate	$35,559 25
On train mile estimate	25,352 43
On defendants' estimate	23,047 66

By this allowance we certainly have charged the local freight with all that complainant can possibly claim on any reasonable basis.

The distribution is now made on this basis and results as follows:

	Total.	Inter-State.	Local.
Earling's estimate	$1,042,896.16	$1,007,336.91	$35,559.25
Train mile estimate	747,955.01	722,602.58	25,352.43
Defendants' estimate	679,015.06	655,967.40	23,047.66

Interest and Dividends.

Complainant contends that its investment in South Dakota amounts, in round figures, to $20,000,000. That its annual interest charge is about 5.69 per cent., and on the entire capital would amount to $1,138,000 annually.

Our contention is that the complainant's property in South Dakota is not worth to exceed $10,000,000, and at the rate named, the annual interest charge would amount to $569,000.

What we have said about the distribution of the operating expenses applies with equal force to this interest charge or contribution to capital account.

Charging 66 per cent. to freight and 34 per cent. to passenger, we have the distribution as between these two departments of the service as follows:

	Freight.	Passenger.
On complainant's valuation.....	$751,080.00	$386,920.00
On defendants' valuation.....	375,540 00	193,460 00

If we now distribute the freights proportion between the inter-state and local on the basis of the tons hauled, we find that on complainant's valuation it amounts to .776 cents per ton mile, and on defendant's valuation it amounts to .388 cents per ton mile, and these figures multiplied by the local tons one mile gives us the following:

On complainant's valuation.....	$17,033 32
On defendants' valuation...	8,516 66

Complainant may contend that this interest charge should be apportioned on the revenue basis, but we must insist that complainant's exhorbitant charges for transporting local freight and thus securing a much larger revenue than it is entitled to ought not to furnish a basis or excuse for loading onto the local freight a correspondingly exhorbitant proportion of the burdens.

The local tonnage is 2.27 per cent. of the total tonnage in South Dakota, yet this local tonnage is made to produce 9.5 per cent. of the freight revenues. Then, again, if we proceed to distribute on the revenue basis, we are led into the difficulty of determining the amount of the inter-state earnings to be credited to South Dakota. Because complainant may have apportioned the inter-state earnings on the mileage basis

does not foreclose all inquiry into the reasonableness of such apportionment. Then, again, we are here to determine the issues in this case without being influenced by the amount of the inter-state earnings.

The result of our inquiry into the local freight issues in this case is now before us.

Final Result on the Freight Issue.

On the basis of complainant's contention we find that the local freights share of the operating expenses as estimated by Mr. Earling, and properly apportioned, amounts to $35,559.25. That of the interest charge on basis of complainant's valuation the local freight should be charged with $17,033.32, making a total charge against the local freight of $52,592.57. The revenues from local freight amount to $102,289.23. The proposed schedule would reduce the revenues 17.44 per cent., making a reduction of $17,839.24, leaving a revenue of $84,449.99. Deduct from this the total charges against local freight and we still have $31,857.42 to go to surplus.

On the basis contended for by defendants we find that the local freights share of the operating expenses, properly apportioned, amounts to $23,047.66. That of the interest charge on basis of defendant's valuation of complainant's property, the local freight should be charged with $8,516.66, making a total charge against the local freight of $31,564.32. Deducting this sum from the lo-

cal freight revenue and also deducting the amount of the proposed reduction, we have $52,885.67 to go to surplus.

This surplus is equal to 2.4 cents a ton mile, an amount per ton mile that is more than double the average revenue of 1.008 cents per ton mile on complainant's system of railway. To show the enormous proportions of this surplus, we find that if complainant had earned a surplus of 2.4 cents per ton mile on its entire freight traffic for 1897, its surplus would have amounted to the enormous sum of $52,637,785.92, or $22,000,000 more than its entire gross earnings, and sufficient to pay a dividend of 25 per cent. on its total capitalization. The revenue from local freight in South Dakota amounts to 4.66 cents per ton mile. If complainant had earned 4.66 cents per ton mile on its entire tonnage for 1897, its freight revenues would have amounted to $102,205,-034.32, a sum equal to 48 per cent. of complainant's total capitalization.

Counsel for complainant may point out places where we have criticised their estimates too harshly and perhaps may find here or there an errer in our estimates, but this will be of no avail because if we accept Mr. Whittemore's valuation and Mr. Earling's expense account there is still sufficient revenue from local freight to pay its fair proportion and leave a surplus over and above the allowance for the proposed reduction of $31,857.42.

Upon what theory is the complainant entitled to the verdict on this freight issue? In order to support such a verdict it will be necessary to sustain complainant's valuation of $20,000,000 and its expense bill of $1,520,309.92, and then it will be necessary to apportion this expense to local freight by that "two or three times 85 per cent. theory."

It has been suggested, and possibly complainant may, as a last resort, contend that it is impossible to determine the amount of operating expenses and fixed charges to be taxed up against the local freight.

This is simply an excuse to get away from the actual figures and get back to the percentage theories, and thus conceal the facts behind a confusion of percentages.

On the other hand, if it is true that the local and inter-state traffic is so interwoven as to be inseparable and that it is impossible to determine just how much of the value of the property and how much of the operating expenses and fixed charges are to be apportioned to local traffic, how is complainant, having the burden of proof, to show to the Court that any given rate for transportation of local traffic is not compensatory?

Even on the percentage theory, complainant cannot make out a case if the percentages are equitably worked out. For instance, Mr. Winnie testifies that for the year, 1897, the operating expenses in South Dakota

were 69.24 per cent. of the revenues. (Page 32). The total freight revenues were $1,074,741.86; 69.24 per cent. of that sum would make an operating expense of $744,161.26, or .77 cents per ton mile.

According to Mr. Truesdale's formula we increase this amount 50 per cent. for local freight, making it 1.155 cents per ton mile. Multiply this sum by the local tons one mile and we have an operating expense of $25,352.43.

Mr. Winnie's figures, of course, are on the train mileage basis. We have also made an estimate of operating expenses on the train mileage basis and have carried the estimate through the whole field of divisions, distributions and apportionments, and when we reached the final result, the amount of operating expenses to be charged against the local freight, we found the amount to be $25,352.43, coming out exactly with Mr. Winnie's figures.

This is a strong corroboration of our distributions and apportionments, and of our interpretation of Mr. Truesdale's formula.

In order that there may be no mistake about this local freight issue, we will go to the limit of complainant's contention.

We have found that on Mr. Earling's estimate, the average expense per ton mile was 1.08 cents and amounted to $23,706.17. Now multiply this by Mr.

Earling's "two or three times theory," say, two and one-half times, and thus fix the local freight expense at $59,265.42; add to this the interest charge estimated on complainant's $20,000,000 valuation, amounting to $17,033.32, and we have a total charge against the local freight of $76,268.75. The local freight revenues after deducting the amount of the proposed reduction amount to $84,449.99. So that even allowing the complainant's most exhorbitant claims, we yet have $8,181.12 to pass to surplus.

One of the contentions of the complainant in this case has been that the South Dakota lines have always been unprofitable and not self-sustaining.

In other words, that the acquisition of this property has proved to be a very bad investment. Now, what are the facts? According to complainant it has $20,000,000, or 9.4 per cent. of its entire capitalization invested in these South Dakota lines. It received during 1897, from local traffic $102,289, and $3,636,897 from inter-state freight originating or terminating on these lines of railway. This inter-state traffic consisted of 1,266,588 tons hauled an average distance of 74 miles in South Dakota and 212.5 miles outside of Dakota. Allowing the complainant .6 cents per ton mile for the haul outside of Dakota we would deduct $1,604,898 from the $3,636,897 and have $2,001,999 as the profit to complainant, making the local and inter-state freights worth $2,104,288 to the complainant.

Add to this the $412,950 of local passenger, express, mail and miscellaneous earnings and we have a total of $2,517,238 earned at an operating expense of not to exceed $1,000,000, leaving the net value of the Dakota lines to complainant at $1,500,000 annual net revenue, a sum sufficient to pay an annual dividend on the alleged valuation of $20,000,000 of 7.5 per cent., or 15 per cent. on the actual value of $10,000,000. The net revenues of the entire system are stated to be $11,909,228, and the cost of road at $212,594,714. This net revenue would pay an annual dividend of only 5.5 per cent., as against the 7.5 per cent. which the Dakota lines would yield.

We find that the total freight on this entire $212,000,000 of railway amounted, in 1897, to $22,104,802. We have found that the $20,000,000 invested in Dakota represent 9.4 per cent. of this $212,000,000, Now 9.4 per cent. of the total freight revenues amounts to $2,077,851. This would be the sum which the $20,000,000 should earn in order to earn its share of the $22,104,802. We have just seen that this $20,000,000 in Dakota has a freight earning value of $2,104,288, or $26,437 more than its proportion. Complainant may by some system of book-keeping figure out that the Dakota lines are not self-sustaining, but the foregoing analysis of the facts cannot be overcome. We are sustained in this by Mr. Chappel of the Alton railway, when he testified as follows, (page 344) :

Q.—Suppose that the total freight revenues of the Chicago, Milwaukee & St. Paul Railway system were $22,000,000 for the year ending June the 30th, 1897, and that of that $22,000,000, $5,000,000 was earned from business that originated or terminated upon this 17 per cent. of its lines?

A.—I should think the business would be of some value—some considerable value to the Chicago, Milwaukee & St. Paul system.

Q.—And that, while the earnings apportioned upon the mileage basis, would not cover the expenses of operating branch lines, yet considering the revenue to the system, you would say that it was a fair business proposition?

A.—It might be; I should think it would be.

How Freight Rates are Determined.

In the Nebraska case this Court defined the rule by which the reasonableness of a given freight rate should be determined and from the rule so laid down we find the issue to be, will the proposed schedule of rates yield to the carrier a fair return, over and above the cost of the service, upon the value of that which it employs in serving the public. This may be said to be the judicial formula for determining the value of the services of a public carrier when the state has sought to limit the tolls to be collected by such carrier.

The state does not assume to name the exact tolls to

be collected but simply names a maximum which is not to be exceeded by the carrier, and the carrier within the limits of such maximum, names the actual compensation for its services.

What are the considerations that influence the carrier in naming the rate? By what rule or formula does the carrier ascertain the rate to be charged? When the complainant constructed its eleven hundred miles of road into the Territory of Dakota and thus opened up a new railroad field, what data, rule or formula controlled the traffic manager as he proceeded with the task of prescribing a table or schedule of freight rates for their new line of railway?

We endeavored to elicit this information by cross-examination of the traffic manager, Mr. Bird. He has been engaged in naming rates on complainant's lines for over thirty years and if there is any definite rule or formula he certainly is familiar with it.

We quote his testimony on this proposition, (pages 190, 191, 192):

Q.—Let me ask you, Mr. Bird, suppose that your company should construct 1,000 miles of road in a new territory, as it did in South Dakota, and you were called upon to prepare a schedule of rates for that new territory, what data would you use, what foundation, with which to construct that schedule?

A.—I testified this morning that I had been in the

service somewhat over thirty years and had been engaged in making rates during that time, and I never have yet had an opportunity of making a tariff on a basis of what the service was worth. I have never had the opportunity to determine the rate by the value of the services. The rates are made what they must be. The rate on wheat from Duluth to Buffalo has a good deal to do with fixing the rate from any point on our road in the Dakotas to Chicago, Milwaukee, Minneapolis and other markets, and if I should undertake to tell you how we make rates to Chamberlain I would have to sit down with you with a map or diagram and go over the whole territory, but I say this, there is not a place on the St. Paul lines where the rates are made with reference to the value of the services to be performed.

Q.—Then it is simply a question of making the best rate you can, competition and other things being considered?

A.—Just exactly as those merchandise rates from Aberdeen and Sioux Falls to South Dakota stations; sometimes they are made by competition, people saying "We are ruined if you don't do it," and sometimes they state the case correctly and we try to make the rate to suit their case.

Q.—But in no case have you ever in your experience of thirty years been able to make a rate which would

yield what you would consider a sufficient return to reward the company for its services?

A.--I can say that I have not. The circumstances are as varied as one can imagine, where the rate is considered fair, and reasonable compensation. But you establish a general basis of rates, and it is the standard for your business. I do not recall a place where we have been able to make a rate with sole reference to the service.

Q.—Mr. Bird, has the character of the service anything to do with the making of the rate?

A.—I don't quite comprehend the drift of that question.

Q.—We will suppose that a line was served by two trains per day and another line was served by a train three times per week, would these facts have anything to do with fixing the rates to be charged?

A.—Well, I should have to answer that by going going back to my other answer, that as a general proposition the rates are made upon the basis of what the competition generally will permit, and they are not made upon the value of the services at all. They are not based upon the value of the services.

There is only one deduction to be made from this testimony and that is that the rates are determined by the sole question of how much can be charged and yet secure the business. This testimony is a confirmation of the popular idea that the railroads charge all the traffic

will bear. From this testimony we find that none of the considerations which compose the judicial formula enter into the traffic manager's solution of the problem. This being true, existing rates named by traffic managers can not be presumed to be reasonable nor can they be accepted as evidence of their own reasonableness; hence, we contend that the fact that the existing rates are higher and afford more revenue than the proposed schedule, can have no influence in a judicial investigation of the reasonableness of the proposed schedule.

Although Mr. Baird is a well informed, competent and experienced traffic manager and as well qualified to testify to the direct question as any person could well be, yet he has not testified that the proposed schedule would not afford a fair compensation, or that as a business proposition he could not accept the South Dakota business on the basis of the proposed schedule.

Upon all the facts brought to the attention of the Court can the Court now find, so far as this freight issue is concerned, that the Board of Railroad Commissioners by the promulgation of the proposed schedule of maximum freight rates are guilty of an abuse of the reserved powers to regulate these public corporations?

The Passenger Rates.

We have heretofore found that the share of the operating expenses chargeable to the passenger traffic in South Dakota was on a basis of:

Earling's estimate $477,413.76
Train mile estimate 344,120.54
Defendant's estimate 321,863.38

By Exhibit 8. page 25, we learn that the earnings for the years 1894, 1895, 1896 and 1897 were as follows: Local passengers, $905,737.01; inter-state passengers, $586,810.97; express, $251,828.93; mail, $484,444.11; miscellaneous, $99,328.01.

This makes an average annual earning of local passengers, $226,434.25; inter-state passengers, $146,702.74; express, $62,957.23; mail, $121,111.02; miscellaneous, $24,832.00, or a total average annual earning of $582,-037.24, all of which is local except the inter-state passenger. This would give the total local earnings, $435.-334.50, and inter-state $146,702.74.

In view of the fact that the inter-state earnings are apportioned to South Dakota on the basis of the local rate we can apportion the expenses on the revenue basis. That is to say, South Dakota lines have received exactly the same revenue for carrying inter-state passengers that they have for carrying local passengers.

On this proposition, Mr. Winnie testifies as follows, (page 575-6.)

Q.—Is it not a fact that all inter-state business is 4 cents per mile business?

A.—I understand that it is substantially so; yes, sir.

Q.—Is it a fact that all tickets sold from Chicago to

South Dakota points are sold upon a 4 cents a mile basis?

A.—I can't testify in regard to that. I am not familiar with the rates, personally. I understand that in the division of the earnings to South Dakota, they are given 4 cents per mile.

Q.—That is to say, that an inter-state ticket is not divided upon a mileage basis pro rata of the amount received for the ticket.

A.—I understand not. I understand Dakota, as a rule, is given 4 cents a mile on inter-state business.

We find that the operating expenses as estimated by Mr. Earling are equal to 82 cents per dollar of revenue, and as estimated on train mile basis are equal to 59.1 cents per dollar of revenue, and as estimated by defendants are equal to 55.2 cents per dollar of revenue.

This would make the local earnings share of the expenses as follows:

On Earling's estimate	$356,974.29
On train mile estimate	257,282.68
On defendant's estimate	240,304.64

The proposed reduction only relates to four cent per mile business, as we simply propose to reduce the maximum from 4 cents per mile to 3 cents per mile. Many passengers are carried on mileage tickets which sell for $25 for 1,000 miles, or $50 with $10 rebate, or $40 net

for 2,000 mile tickets, while others are carried on round trip and excursion tickets.

This makes it necessary to determine how much of the local passenger earnings are earned on four cents a mile tickets.

This information is furnished by Mr. Winnie in "Exhibit 29," page 564, for the period of six months ending October 31, 1896. The Exhibit is as follows:

EXHIBIT 29.

Total Passenger Earnings in South Dakota, Six Months Ending October 31, 1896.

	Total	Amount of Earnings @ 4c per mile
Business local to South Dakota:		
At 4c per mile	$41,990.51	$41,990.51
At 3c per mile	25,527.75	
At 2½c per mile	9,298.00	
At 2c per mile	35,419.72	
At 1c per mile	951.82	
Total local to South Dakota	$113,187.80	
Total inter-state business	69,784.25	69,784.25
Total from all sources	$182,972.05	$111 774.76
Percentage of business @ 4c per mile to total business	61.09 per cent.	
Reduction of 25 per cent. on 61.09 per cent. of $182.972.05		$27,943.69
Percentage of reduction on business @ 4c per mile to total passenger business of South Dakota	15.27 per cent.	

By this table it appears that the total local earnings from passengers amounted $113,187.80, and that of this amount $41,990.51 was earned on the 4 cent tickets; $41,990.51 is 37 per cent. of $113,187.80, and thus we have a basis for our computations.

The local passenger earnings amounted to $226,434.25 ; 37 per cent. of this amounts to $83,780.67.

Now, the reduction from 4 to 3 cents per mile will reduce this portion of the earnings 25 per cent. and will amount to $20,945.16. Deduct this amount from the total local earnings and we have $414,389.34 remaining as the revenue that would have been earned under the proposed schedule.

This would, after deducting the operating expenses as estimated by Mr. Earling, have a net local revenue of $57,415.05 ; and on train mile estimate, $157,106.66 ; and on defendants' estimate, $174,084.70.

We have heretofore found that the passenger traffic should pay $386,920.00 of the 5.69 per cent. interest on the $20,000,000 valuation, or $193,460.00 of the 5.69 per cent. interest on the $10,000,000 valuation.

Apportioning this interest charge on the revenue basis, we find that the interest charge of $386,920 is equal to 66.4 per cent. of the total passenger revenue, and 66.4 per cent. of the local earnings would be $288,961.99 ; and the interest charge of $193,460 is equal to 33.2 per cent. of the total passenger revenue, and 33.2 per cent. of the local earnings would be $144,480.89.

Thus we find that the local passenger revenue after applying the proposed reduction will not pay its proportion of Mr. Earling's expense bill and interest on $20,000,000 valuation, but we do find that it will pay

the expenses as estimated on train mile basis and interest on the $10,000,000 valuation and have a surplus of $12,625.67; and on defendants' estimate of expenses it will yield a surplus of $29,603.71.

From this analysis of the passenger traffic, we find that to support the complainant's bill the Court will have to sustain complainant's valuation of $20,000,000 and Mr. Earling's $1,520,309.92 operating expenses.

We do not believe the Court can sustain the complainant on either of these propositions, so that complainant's bill should be dismissed without any further showing on our part.

However, there are other interesting questions presented by this passenger rate issue.

By "Exhibit 29" we have the data to estimate the number of passengers carried one mile on the several rates, as follows:

$41,990.51, @ 4c	1,049,763	passenger	miles
25,527.75, @ 3c	850,925	"	"
9,289.00, @ 3½c	371,920	"	"
35,419.72, @ 2c	1,770,986	"	"
957.82, @ 1c	95,182	"	"
$113,187.80	4,138,776		

These figures show that the average per passenger mile is 2.73 cents. That on 3,089,011 passenger miles, or 74.5 per cent. of the passenger miles, the revenue is 3 cents or less, and 2,142,906 passenger miles, over one-half of the total, is on 2 and 2½ cents mileage.

We have no statistics at hand with which to make comparison, but the travel and mileage in South Dakota is certainly more than the average. This is due to the high rates for regular tickets. It is a well known fact that as a rule a great portion of the travel on mileage is by commercial travelers, but in Dakota where the ticket rate is 4 cents a mile, all persons who do, or expect to travel 1,000 miles a year or go upon a journey of 1,000 miles, buy mileage.

It is only fair to assume that if the tickets could be purchased at three cents a mile there would not be nearly so many mileage books used, as the ordinary traveler would pay three cents rather than invest so much money at one time in a mileage book. That the reduction of the fare increases the travel cannot be doubted. The greater part of passenger travel is not a necessity. There is, of course, a certain portion of the travel that is a matter of business necessity, but by far the greater portion is either for pleasure or because the rates are low enought to make business travel profitable. If the rates are lowered it increases the pleasure travel and makes possible a larger amount of profitable business travel. When we consider the amount of travel that is due to actual necessity it is exceedingly small.

The passenger train mileage for 1897 was 435,717 miles. Using one-half of this amount for six months, 217,858, and dividing the total passenger fares collected

for six months, as shown by "Exhibit 29," we have a total of fares from passengers of 83.9 cents per passenger train mile; while the average on the complainant's railway system was, for 1895, 75.25 cents; 1896, 76.55 cents, and for 1897, 70.87 cents. Thus it is found that complainant is actually receiving more money per passenger train mile in South Dakota than the average on its railway system.

The proposed reduction will amount to $20,945.16 per annum, and on 435,717 train miles will amount to five cents a train mile.

Deduct this from the 83.9 cents per train mile and we have 78.9 cents per train mile—an amount still exceeding the averages above quoted.

Is it possible that complainant cannot afford to move its light passenger trains in South Dakota for the same revenues from passengers that it does upon its other lines, especially when we consider that the passenger trains in South Dakota are made up of ordinary day coaches, and complainant is not put to the expense of hauling vestibuled trains composed of heavy sleeping and parlor cars, as is the case on complainant's other lines of railway?

On this train mile estimate of operating expenses we found that the passenger service should pay $344,120.54; this divided by the passenger train miles, 435,717, gives us an operating expense of 78.9 cents per passenger train

mile. We now find that complainant collects 83.9 cents from passengers, and as reduced by the proposed reduction the fares from passengers would exactly pay this expense, leaving the entire earnings from mail, express and baggage, amounting to 47.9 cents per train mile, as profit.

This concludes our investigation into the facts involved in this controversy.

There is yet another view of this case to be considered, and that is the theory upon which the circuit court disposed of this case. The Court said:

"No court as yet has promulgated any rule as to how this court shall arrive at a true and just valuation upon which to figure local earnings. In the absence of any such rule, this court believes that it is fair and just to first ascertain what per cent. of the total gross earnings in any one year the total local earnings are for that year, and, having ascertained that per cent., to take the same per cent. of the total value of the property as a fair value upon which to fix local earnings. Following out this rule, let us take the four fiscal years immediately prior to the institution of this suit, and ascertain what per cent. the local earnings for these years would have earned upon a valuation thus determined and what reduction of that percentage will be made by the schedule sought to be promulgated by the defendants and which it is stated reduces the present tariff of com-

plainant, speaking in round numbers, of fifteen per cent. on local passenger business and seventeen per cent. on local freight business. The total earnings from all sources of the complainant company on its lines in the state of South Dakota for the fiscal year ending June 30th, 1894, were $1,840,651.79. The total local earnings for freight and passenger services during the same period were $407.606.35. In round numbers this would make the local earnings 22 per cent. of the gross earnings from all sources for the year 1894. 22 per cent. of $10,000,000.00, the value of complainant's property in the state of South Dakota, would be $2,200,000. The local earnings for said year, stated above as $407,606.35. using round numbers, would be 18 5-10 per cent. on said last mentioned sum.

"The total earnings, from all sources, of the complainant company on its lines in the state of South Dakota for the fiscal year ending June 30th, 1895, were $1,236,-680.78. The total local earnings for freight and passenger services during the same period were $330,642.85. In round numbers this would make the local earnings 26 per cent. of the gross earnings from all sources for the year 1895. 26 per cent. of $10,000,000.00, the value of the complainant's property in South Dakota, would be $2,600,000. The local earnings for said year, stated above as $330,642.85, using round numbers, would be 12 7-10 per cent. on said last mentioned sum.

"The total earnings from all sources for the fiscal year ending June 30th, 1896, were $1,557,100.60. The total local earnings for freight and passenger service during the same year were $328,105.95. In round numbers this would make the local earnings 21 per cent. of the gross earnings from all sources for the year 1896. 21 per cent. of $10,000,000, the value of complainant's property in the state of South Dakota, would be $2,100,000. The local earnings for said year, $328,105.95, using round numbers, would be 15 6-10 per cent. on said last mentioned sum.

"The total earnings from all sources for the fiscal year ending June 30th, 1897, were $1,605,210.66. The total local earnings from freight and passenger services during the same period were $311,005.42. In round numbers this would make the local earnings 19 per cent. of the gross earnings from all sources for the year 1897. 19 per cent of $10,000,000, value of complainant's property in the state of South Dakota, would be $1,900,000. The local earnings for 1897, $311,005.42, using round numbers, would be 16.3 per cent. on the last mentioned sum.

"It will thus be seen that the local earnings of the complainant's lines on the same proportion of the total value of the road as the local earnings bear to the gross earnings from all sources in South Dakota were:

For the year 1894	18.5 per cent
For the year 1895	12.7 per cent
For the year 1896	15.6 per cent
For the year 1897	16.3 per cent

"Now, let us ascertain the per cent. which the local earnings of the road for the four years mentioned would produce on the proportionate valuation above stated after being reduced by the proposed schedule of the railroad commissioners:

For the year 1894 the total local freight earnings were $137,459.88, which, being reduced 17 per cent. would equal.... $114,091.70
For the same year, the total local passenger earnings were $270 146.47, which, reduced 15 per cent. would equal..... 229.624.50
These reduced local freight and passenger earnings equal.. $343,716.20

"This reduction on the local business would reduce the total earnings from all sources from $1,840,651.79 to $1,776,761.64, of which amount the reduced local earnings for the year 1894 would be, in round numbers, 19 per cent.; 19 per cent. of $10,000,000 would be $1,900,000, and the local earnings, as reduced, would be 18 per cent. of that amount.

For the year 1895 the total local freight earnings were $121,442.00, which, being reduced 17 per cent, would equal.... $100,796.86
For the same year the total local passenger earnings were $209,200 85, which, being reduced 15 per cent. would equal 177,820.72
Total reduced local freight and passenger earnings.... $278,617.58

"This reduction on the local business would reduce the total earnings from all sources for that year from $1,236,680.78 to $1,184,655.51, of which amount the reduced local earnings for the year 1895 would be, in round numbers, 23 per cent.; 23 per cent. of $10,000,000 would be $2,300,000, and the local earnings for that year, as reduced, would be 12.1 per cent. of that amount.

For the year 1896 the total local freight earnings were $110,432.45, which, being reduced 17 per cent., would equal.... $91,660.93
For the same year the total local passenger earnings were $217,673 50, which, reduced 15 per cent., equal..... 185,022 47
Total reduced local freight and passenger earnings... $276,683.40

"This reduction on the local earnings would reduce the total earnings from all sources for that year from $1,557,100.60 to $1,505,678.05, of which amount the reduced local earnings for the same year would be, in round numbers, 18 per cent., and 18 per cent. of $10,000,000 would be $1,800,000, and the local earnings for that year, as reduced, would be 15.3 per cent. of that amount.

For the year 1897 the total local freight earnings were $102,289.23, which, being reduced 17 per cent., would equal..... $84,900.06
For the same year the total local passenger earnings were $208,716.19, which, being reduced 15 per cent., equal.... 177,408.76
Total reduced freight and passenger earnings..... $262 308.82

"This reduction on the local earnings would reduce the total earnings from all sources for that year from $1,605,210.66 to $1,556,514.06, of which amount the reduced local earnings for the same year would be, in round numbers, 16 per cent. 16 per cent of $10,000,000 would be $1,600,000, and the local earnings for that year, as reduced, would be 16.2 per cent. of that amount.

"It will thus be seen that if the commissioners' schedule of rates and fares had been in effect during the four years that we have considered there would have been an earning on the value of the property apportioned to local earnings of—

18.0 per cent. for the year ending June 30, 1894.
12.1 " " " " " " June 30, 1895.
15.3 " " " " " " June 30, 1896.
16.2 " " " " " " June 30, 1897.

"It certainly would be impossible for this court to find, beyond a reasonable doubt, that these per cents. allowed to be earned by the railroad company for local earnings would be depriving it of its property without due process of law, or depriving it of the equal protection of the laws.

"This being the view of the court, it necessarily results that the bill must be dismissed and the temporary restraining order, granted in this action, dissolved."

The substance of the foregoing language of the circuit court is that the gross revenue equalling those per cents. of the value of the property apportioned to local traffic on the revenue basis was a sufficient revenue for all purposes.

The average per cent. for the four years was 15.72 per cent., and the average, after applying the proposed reduction, for the four years, was 15.4 per cent. It will be seen that the Court apportioned the value of the property to the local traffic on the revenue basis. As we have heretofore contended, this was more than fair to complainant. This, then, leaves us only to inquire as to the correctness of the Court's conclusion that a gross revenue of 15.4 per cent. is a sufficient revenue for all

purposes, with the inference that if it is not sufficient it is because of over-capitalization or mismanagement.

It will be remembered that on pages 5 and 6 of this brief we called attention to the fiscal affairs of complainant for the year 1897, and that we found that the complainant's entire revenue for that year amounted to $30,468,767.99, and equalled 14.3 per cent. of its total capitalization. That out of this 14.3 per cent. gross revenue complainant paid all its operating expenses, taxes, interest and dividends, and over and above all, passed $683,029.06 to surplus.

By reference to page 28 of the annual report for 1897 we find a statement of the gross earnings for the years 1894, 1895, 1896 and 1897. By computation we find the average for the four years to be $30,432,979, or a trifle less than for the year 1897. We find by "Exhibit 58," page 773, that during those years and out of that revenue complainant paid its expenses, interest and dividends. We have no data showing exactly how much was passed to surplus during each of those years, but we do find that at the end of the four years complainant had a surplus on had of $8,509,719.85. This item is designated "income account" and will be found on pages 21 and 22 of the annual report for 1897.

There is no data contained in the record of this case by which comparisons with other railways can be made, but if complainant can pay all its operating expenses,

taxes, insurance, interest and dividends and accumulate a surplus on an annual gross revenue of 14.3 per cent., then why is it that the Circuit Court was not justified in finding that a gross revenue of 15.4 per cent. was sufficient for the purposes of this case?

It has been suggested and may be urged in this case that the circuit court forgot the operating expenses, and treated this 15.4 per cent. as net revenue. The criticism is so entirely without foundation that we would not notice it were it not for the language of the circuit court in the North Dakota case, wherein the Court said:

"Counsel for defendants cites as directly in point a recent decision of the United States circuit court for the District of South Dakota in the case of Chicago, Milwaukee & St. Paul Railway Company vs. Board of Railway Commissioners, which involved substantially the same issues as the cases under consideration. There can be no criticism of the law as declared in the opinion in that case, but the learned judge seems to have proceeded upon a fundamental error of fact. In determining the rate of income which the company was earning upon the value of its property, as fixed by the Court, no allowance whatever is made for operating expenses, but the entire gross receipts of the road are treated as net profits. This error greatly weakens, if it does not destroy, the authority of the opinion."

Northern Pacific Ry. vs. Keyes, 91 Fed. 59

The above language indicates such a complete misconception of the theory upon which this case was disposed of that we cannot refrain from saying that it was the North Dakota court that became entangled with this *fundamental error of fact.*

Not only is the Court sustained in this 15.4 per cent. proposition by the actual results of complainant's transactions for the years named, but the analysis of the facts in this case conclusively show that such revenue is sufficient, and that out of it complainant not only secures enough to pay all charges properly assignable to local traffic, but in addition thereto secures at least a comparatively fair proportion of the surplus it has been accumulating.

We have gone into all the details of the facts involved in this controversy more fully perhaps than was necessary, yet we feel that such detailed examination was proper because the facts concerning the construction and operation of a great railway system are not matters of common knowledge with which the Courts are presumed to be conversant.

The writer has neither constructed nor operated any railway, hence has no knowledge concerning these matters other than that acquired by the preparation and trial of this cause, therefore we cannot and do not assert that our conclusions of fact are absolutely correct, but only that they are the result of the best analysis of this case that we are able to make. If we have at times resorted to

conjecture and guess work, it has been occasioned by the failure of the complainant to produce satisfactory evidence from which the fact could be deduced.

The complainant is in possession of all the record evidence as well as the technical information and, if it had been so disposed, could have exhibited the true state of facts to the Court. That it has not done so is apparent from the records of this case.

We have no desire to characterize any of the witnesses called by the complainant in this case, but we do feel that the complainant has been very reckless in many of the statements presented to the Court. We can only account for this upon the theory that the testimony was produced with a feeling of immunity from successful contradiction.

Complainant was in possession of the only record and of the information concerning the cost to acquire, maintain and operate these lines of railway. With this monopoly of information and this feeling of security, the complainant has neglected to produce its testimony with that degree of care and good faith required by courts of equity.

We submit, may it please the Court, that the complainant is not entitled to the relief demanded.

Respectfully submitted.

T. H. NULL,

Solicitor and of Counsel for Defendants.

Huron, S. D., Sept. 15, 1899.